Access DB# 95698/ 96062

SEARCH REQUEST FORM

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Scientific and Technical Information Center

JUN -3 2003

Requester's Full Name: Jeffrey E. Russel Examiner #: 62785 Date: 6-3-2003

Art Unit: 1654 Phone Number 308-3975 Serial Number: (SN) 09/815,978

Mail Box and Bldg Room Location: CM1-11D13/CM1-9807 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Hydrazine-Based And Carbonyl-Based Bifunctional Crosslinking Reagents

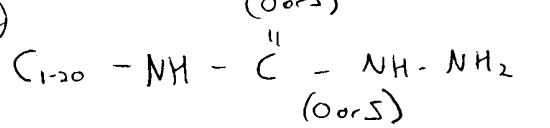
Inventors (please provide full names): D. Schwartz

Earliest Priority Filing Date: 3-22-2001

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search the following partial structures:

(A)



(B) C_{1-20} - NH-NH - C - NH-NH_2

keywords are crosslink?, bifunctional, heterobifunctional, immobili?, conjugat?.

Thank you.

JER

STAFF USE ONLY

Searcher: _____

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: 6/4/03

Date Completed: 6/6/03

Searcher Prep & Review Time: 20 / 10

Clerical Prep Time: _____

Online Time: 30 / 10

Type of Search

NA Sequence (#): _____

AA Sequence (#): _____

Structure (#): 2

Bibliographic: _____

Litigation: _____

Fulltext: _____

Patent Family: _____

Other: _____

Vendors and cost where applicable

STN: 55

Dialog: _____

Questel/Orbit: _____

Dr. Link: _____

Lexis/Nexis: _____

Sequence Systems: _____

WWW/Internet: _____

Other (specify): _____

=> d ib ab hitstr l4 1-5

L4 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2003:556116 HCAPLUS
DOCUMENT NUMBER: 139:115644
TITLE: Ternary biomolecule/polymer/surface-based immobilization methods
INVENTOR(S): **Schwartz, David A.**
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057172	A2	20030710	WO 2002-US1161	20020116
WO 2003057172	A3	20030918		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003146504	A1	20030807	US 2001-50277	20020115
PRIORITY APPLN. INFO.:			US 2001-260094P	P 20010106
			US 2002-50277	A 20020115
			US 2000-181186P	P 20000322

AB Immobilizing natural or synthetic biomols. onto surfaces comprises covalently linking the natural or synthetic biomol. to a mono- or bi-functional polymer and covalently and/or electrostatically immobilizing the biomol./polymer conjugate to an unmodified or modified surface, where the biomol. is an oligonucleotide, a polynucleotide, a protein, a glycoprotein, a peptide or a carbohydrate that was modified to incorporate .gtoreq.1 nucleophilic groups comprising an aliph. or arom. amino, thiol, **hydrazine**, thiosemicarbazide, hydrazide, thiocarbazide, carbazide, aminoxy, a deriv. of 2-hydrazinopyridine or aminoxyacetic acid or .gtoreq.1 electrophilic groups comprising an aliph. or arom. aldehyde, ketone, epoxide, isocyanate, isothiocyanate, succinimidyl ester or cyanuric chloride or a linkable arom. aldehyde or ketone and the surface was modified to possess either neutral, cationic or anionic groups or a combination neutral, anionic and/or cationic moieties.

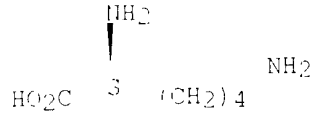
IT **25104-18-1DP**, Polylysine, reaction products with succinimidyl hydrazinonicotinate acetone hydrazone, conjugates **38000-06-5DP**, Polylysine, reaction products with succinimidyl hydrazinonicotinate acetone hydrazone, conjugates **60444-78-2DP**, Succinimidyl 6-formylbenzoate, reaction products with polylysine, conjugates with oligonucleotides **362522-50-7DP**, Succinimidyl 6-hydrazinonicotinate acetone hydrazone, polymer deriv., conjugates with oligonucleotides
RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ternary biomol./polymer/surface-based immobilization systems)

RN 25104-18-1 HCAPLUS
CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

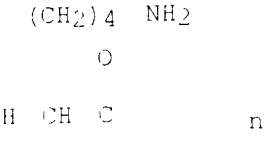
CM 1

CRN 56-87-1
CMF C6 H14 N2 O2

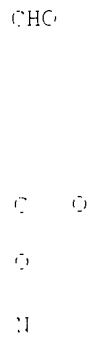
Absolute stereochemistry.



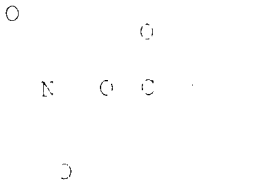
RN 38000-06-5 HCAPLUS
CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



RN 60444-78-2 HCAPLUS
CN Benzaldehyde, 4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]- (9CI) (CA INDEX NAME)



RN 62522-50-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[1,6-dihydro-6-[(1-methylethylidene)hydrazono]-3-pyridinyl]carbonyl]oxy]- (9CI) (CA INDEX NAME)



L4 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS
ACCESSION NUMBER: 2001:713365 HCAPLUS
DOCUMENT NUMBER: 135:272864
TITLE: **Hydrazine**-based and carbonyl-based bifunctional crosslinking reagents for biomolecules, drugs, and synthetic polymers
INVENTOR(S): **Schwartz, David A.**
PATENT ASSIGNEE(S): Cellulink, Inc., USA
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070685	A2	20010927	WO 2001-US8253	20010312
WO 2001070685	A3	20030327		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 20030013857	A1	20030116	US 2001-815978	20010322
EP 1315699	A2	20030604	EP 2001-920666	20010312

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2000-191186P P 20000322
WO 2001-US8253 W 20010312

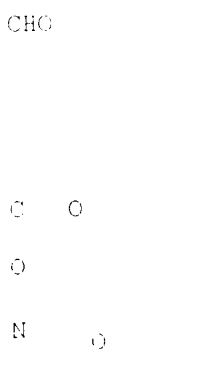
OTHER SOURCE(S): MARPAT 135:272864

AB Reagents and methods are provided for bifunctional crosslinking and immobilizing biomols., drugs, and synthetic polymers. The reagents of formula BRANHNH2.bul.HX [wherein A = NHCO, NHCS, NHNHCO, NHNHCS, or a direct bond; B = an amino or thio reactive moiety; F = specified aligh. divalent groups contg. any combination of cycloalkylene, C(R10)2, CR10:CR10, C:CR12R13, CR12R13, C.tplbond.C, O, SGa, NR10, N+R12R13, CL, etc.; a = 0-1; b = 0-3; G = O or NR10; L = S, O, or NR10; R10 = specified monovalent groups; R12 and R13 = independently H, (cyclo)alkyl, alkenyl, alkynyl, or (hetero)aryl; or R12 and R13 together from (cyclo)alkylene or alkenylene; X = neg. counterion; or a deriv. thereof] possess a thiol or amine reactive group and a hydrazine or oxyamine moiety. Conjugates and immobilized biomols. are also provided. For example, hydrazinonicotinic acid was converted to the acetone hydrazone and treated with N-hydroxysuccinimide to give the crosslinking agent, succinimidyl 6-hydrazinonicotinate acetone hydrazone (I), in 33% yield. A soln. of ovalbumin in PBS and EDTA was added to a soln. of I in DMF and the mixt. incubated at room temp. for 4 h to afford the **hydrazine**-modified protein, which exhibited a molar extinction coeff. of 22,000 at 360 nm.

IT **60444-78-2 362522-64-3**
RL: RCT (Reactant); FACT (Reactant or reagent)
(crosslinking agent; prepn. of **hydrazine**- and carbonyl-based bifunctional crosslinking agents and use with biomols., drugs, and synthetic polymers)

RN 60444-78-2 HCAPLUS

CN Benzaldehyde, 4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]- (9CI) (CA INDEX NAME)

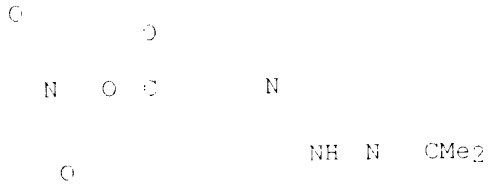


RN 362522-64-3 HCAPLUS
CN Hydrazinecarboxamide, N-[4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]-, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

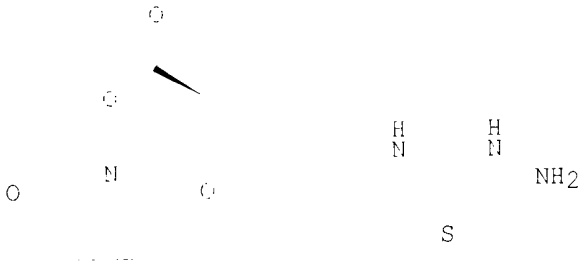
IT **362522-50-7P 362522-51-8P 362522-52-9P**
362522-53-0P 362522-54-1P 362522-55-2P
362522-56-3P 362522-57-4P 362522-58-5P
RL: FCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(crosslinking agent; prepn. of **hydrazine**- and carbonyl-based bifunctional crosslinking agents and use with biomols., drugs, and synthetic polymers)

RN 362522-50-7 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[1,6-dihydro-6-[(1-methylethylidene)hydrazono]-3-pyridinyl]carbonyl]oxy]- (9CI) (CA INDEX NAME)

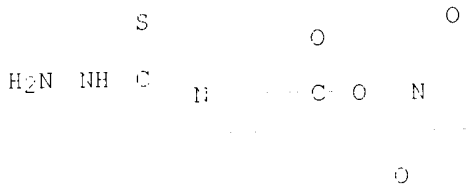


RN 362520-51-8 HCAPLUS
CN Hydrazinecarbothioamide, N-[[trans-4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]cyclohexyl]methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

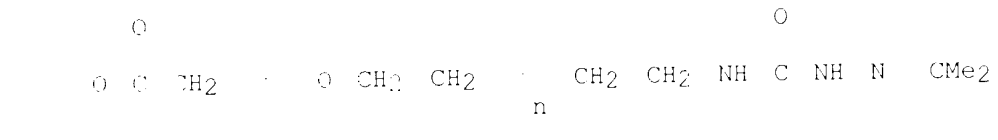
Relative stereochemistry.



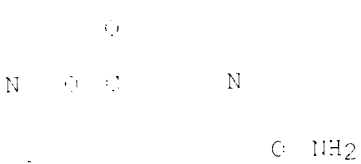
RN 362522-52-9 HCAPLUS
CN 1-Pyrrolidinecarbothioic acid, 3-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]-, hydrazide, monohydrochloride (9CI) (CA INDEX NAME)



RN 362522-93-0 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(2,5-dioxo-1-pyrrolidinyl)oxy]-2-oxoethyl]-.omega.-[2-[[[(1-methylethylidene)hydrazino]carbonyl]amino]ethyl]- (9CI) (CA INDEX NAME)

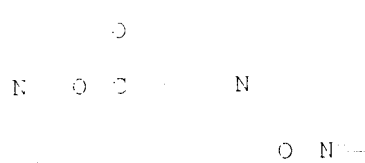


RN 362520-54-1 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[6-(aminooxy)-3-pyridinyl]carbonyl]oxy]-, monohydrochloride (9CI) (CA INDEX NAME)

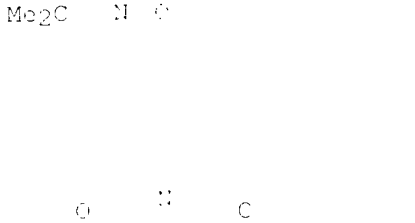


● HCl

RN 362520-55-2 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-[[[6-[[(1-methylethylidene)amino]oxy]-3-pyridinyl]carbonyl]oxy]- (9CI) (CA INDEX NAME)

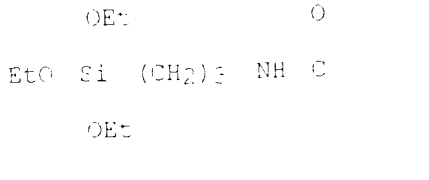


RN 362520-56-3 HCAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[4-[[(1-methylethylidene)amino]oxy]phenyl]- (9CI) (CA INDEX NAME)



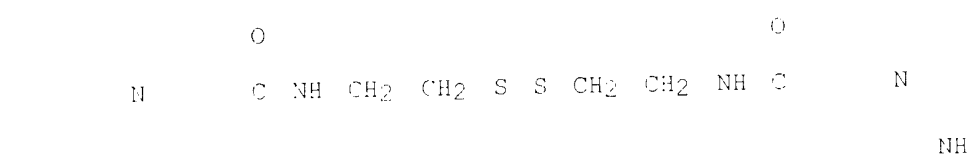
RN 362522-57-4 HCAPLUS

CN 3-Pyridinecarboxamide, 6-[(1-methylethylidene)hydrazino]-N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 362522-58-5 HCAPLUS
CN 3-Pyridinecarboxamide, N,N'-(dithiodi-2,1-ethanediyl)bis[6-hydrazino-, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A

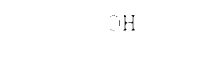


PAGE 1-B

IT **302-01-2DP, Hydrazine**, derivs., preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(crosslinking agents; prepn. of **hydrazine-** and carbonyl-based bifunctional crosslinking agents and use with biomols., drugs, and synthetic polymers)
RN 302-01-2 HCAPLUS
CN Hydrazine (7CI, 8CI, 9CI) (CA INDEX NAME)

IT **6066-82-6**, N-Hydroxysuccinimide **25104-18-1**, Poly-L-lysine **38000-06-5**, Poly-L-lysine **133081-24-0**, 6-Hydrazinonicotinic acid **363633-70-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of **hydrazine-** and carbonyl-based bifunctional crosslinking agents and use with biomols., drugs, and synthetic

polymers)
RN 6066-82-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)

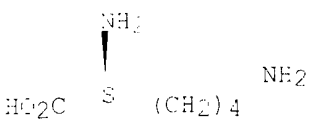


RN 25104-18-1 HCAPLUS
CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

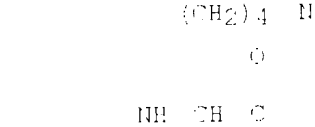
CM 1

CRN 56-87-1
CMF C6 H14 N2 O2

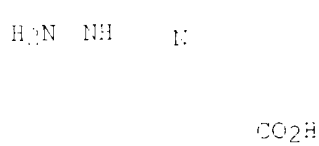
Absolute stereochemistry.



RN 38000-06-5 HCAPLUS
CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



RN 133081-24-0 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-hydrazino- (9CI) (CA INDEX NAME)



RN 363633-70-9 HCAPLUS
CN DNA, d(T-T-T-T-T-T-T-A-G-C-C-T-A-A-C-T-G-A-T-G-C-C-A-T-G), 5'-(6-aminohexyl hydrogen phosphate) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **25104-18-1DP**, Poly-L-lysine, hydrazinonicotinamide modified
38000-06-5DP, Poly-L-lysine, hydrazinonicotinamide modified
364163-70-2P
RL: SEN (Synthetic preparation); PREP (Preparation)

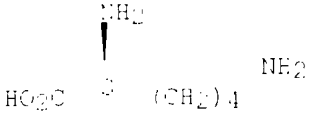
(prepn. of **hydrazine**- and carbonyl-based bifunctional crosslinking agents and use with biomols., drugs, and synthetic polymers)

RN 25104-18-1 HCAPLUS
CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

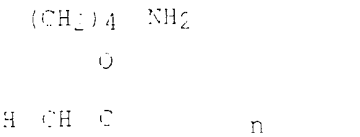
CM 1

CRN 56-87-1
CMF C6 H14 N2 O2

Absolute stereochemistry.



RN 34000-06-5 HCAPLUS
CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



RN 364163-70-2 HCAPLUS
CN DNA, d(T-T-T-T-T-T-T-A-G-C-C-T-A-A-C-T-G-A-T-G-C-C-A-T-G), 5'-[6-[[4-formylbenzoyl)amino]hexyl hydrogen phosphate] (9CI) (CA INDEX NAME)

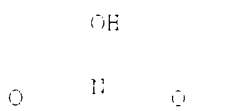
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L4 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:602039 HCAPLUS
DOCUMENT NUMBER: 115:202039
TITLE: Preparation of hydrazine-modified proteins and their use for the synthesis of technetium-99m-protein conjugates
AUTHOR(S): **Schwartz, David A.**; Abrams, Michael J.; Hauser, Marguerite M.; Gaul, Forrest E.; Larsen, Scott K.; Rauh, Donald; Zubieta, Jon A.
CORPORATE SOURCE: Johnson Matthey Pharm. Res., West Chester, PA, 19380-1437, USA
SOURCE: Bioconjugate Chemistry (1991), 2(5), 333-6
CODEN: BCCHES; ISSN: 1043-1802
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The syntheses and protein linking properties of succinimidyl 4-hydrazinobenzoate hydrochloride (SHBH) and succinimidyl 6-hydrazinonicotinate hydrochloride (SHNH), two new heterobifunctional linkers which lead to hydrazino-modified proteins, are described. SHBH-modified proteins are unstable due to the presence of the **phenylhydrazine** moiety. This problem was overcome by synthesizing the hydrazinopyridine analog SHNH, and the conjugates derived from this

linker are stable. Tc(V) oxo precursors readily add to hydrazinopyridine-modified proteins to yield the desired 99mTc-radiolabeled protein. 99mTc-hydrazinopyridine-polyclonal IgG conjugates are useful agents for the imaging of focal sites of infection.

IT **6066-82-6**, N-Hydroxysuccinimide
PL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with hydrazinobenzoic acid deriv.)

RN 6066-82-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)

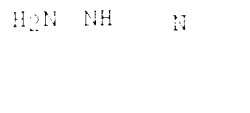


L4 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:181413 HCAPLUS
DOCUMENT NUMBER: 114:181413
TITLE: Technetium-99m-human polyclonal IgG radiolabeled via the hydrazino nicotinamide derivative for imaging focal sites of infection in rats
AUTHOR(S): Abrams, Michael J.; Juweid, Malik; TenKate, Caroline I.; **Schwartz, David A.**; Hauser, Marguerite M.; Gaul, Forrest E.; Fuccello, Anthony J.; Rubin, Robert H.; Strauss, H. William; Fischman, Alan J.
CORPORATE SOURCE: Dep. Radiol., Massachusetts Gen. Hosp., Boston, MA, USA
SOURCE: Journal of Nuclear Medicine (1990), 31(12), 2022-8
CODEN: JNMEAQ; ISSN: 0161-5505
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The biol. behavior of human polyclonal IgG radiolabeled with 99mTc, by a novel method, via a nicotinyl **hydrazine** deriv., was evaluated in rats. Technetium-99m- and indium-111-IgG were coadministered to normal rats and biodistribution was detd. at 2, 6, and 16 h. The inflammation imaging properties of the 2 reagents were compared in rats with deep-thigh infection due to Escherichia coli. Blood clearance of both antibody prepns. was well described by a biexponential function: (99mTc-IgG: t1/2 = 3.82 and 57.52 h, 111In-IgG: 3.93 and 40.71 h). Biodistributions in the solid organs were similar; however, small but statistically significant differences were detected: 99mTc-IgG > 111In-IgG in lung, liver, and spleen; 99mTc-IgG < 111In-IgG in kidney and skeletal muscle. At all 3 imaging times, target-to-background ratio and percent residual activity for the 2 compds. were remarkably similar. These studies establish that human polyclonal IgG labeled with 99mTc via a nicotinyl **hydrazine** modified intermediate is equiv. to 111In-IgG for imaging focal sites of infection in exptl. animals.

IT **133081-24-0P**
PL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and butoxylation)

RN 133081-24-0 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-hydrazino- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:164011 HCAPLUS
DOCUMENT NUMBER: 114:164011
TITLE: Preparation of succinimido hydrazinoarylcarboxylates and analogs as conjugating agents for biological macromolecules
INVENTOR(S): **Schwartz, David A.**; Abrams, Michael J.; Giandomenico, Christen M.; Zubieta, Jan A.
PATENT ASSIGNEE(S): Johnson Matthey PLC, UK
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 384769	A2	19900829	EP 1990-301949	19900223
EP 384769	A3	19911127		
EP 384769	B1	19960424		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
ZA 9001283	A	19910227	ZA 1990-1283	19900220
NO 9000838	A	19900827	NO 1990-838	19900224
NO 178186	B	19951009		
NO 178186	C	19960207		
AU 9050074	A1	19900913	AU 1990-50074	19900223
AU 630066	B2	19921105		
CA 2010800	AA	19900824	CA 1990-2010800	19900223
CA 2010800	C	20010116		
HU 53000	A2	19901128	HU 1990-970	19900223
HU 207.9	B	19930329		
JP 01027356	A2	19910205	JP 1990-41389	19900223
JP 3073997	B2	20000807		
FI 95907	B	19951229	FI 1990-948	19900223
FI 95907	C	19960410		
AT 137219	E	19960515	AT 1990-301949	19900223
ES 2088506	T3	19960616	ES 1990-301949	19900223
US 5306670	A	19940427	US 1992-868242	19920414
US 5420285	A	19950530	US 1993-26426	19930304
US 5756620	A	19980519	US 1995-384641	19950206
US 6217845	B1	20010417	US 1997-965148	19971106

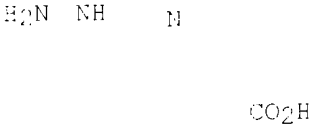
PRIORITY APPLN. INFO.: US 1989-315270 A 19890224
US 1990-493401 B1 19900312
US 1991-668242 A3 19910312
US 1993-26426 A3 19930304
US 1995-384641 A3 19950206

OTHER SOURCE(S): MARPAT 114:164011
GI

AB R3DNRNH.HX, R3DNRN:CR1R2, and R4NRN:CR1R2 (D = bond, CH2, CO, CSNH; R, R1, R2 = H, alkyl; R3 = aryl group Q1; A, B = CH, N; E = CO; G = group readily replaced by a primary amine; EG = maleimido; R4 = thiazolyl group Q2; X = anion) were prepd. Thus, 4-(HO2C)C6H4NHNH2 was N-protected and the product condensed with N-hydroxysuccinimide to give, after deprotection 4-(R5O2C)C6H4NHNH2.HCl (R5 = succinimido) which was conjugated with IgG and the product labeled with 99mTc. The latter gave infected/normal muscle distribution ratio of 6.3 when injected into rats having a hind leg abscess.

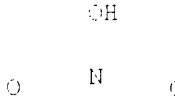
IT **133081-24-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of conjugating agents for biol. macromols.)

RN 133081-24-0 HCAPLUS
CN 3-Pyridinecarboxylic acid, 6-hydrazino- (9CI) (CA INDEX NAME)



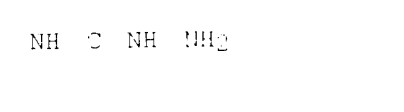
IT **6066-82-6**, N-Hydroxysuccinimide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in prepn. of conjugating agents for biol. macromols.)

RN 6066-82-6 HCAPLUS
CN 2,5-Pyrrolidinedione, 1-hydroxy- (9CI) (CA INDEX NAME)



=> d ibib abs hitstr 19 1-38

L9 ANSWER 1 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:67134 HCAPLUS
DOCUMENT NUMBER: 134:265
TITLE: Attachment of benzaldehyde-modified oligodeoxynucleotide probes to semicarbazide-coated glass
AUTHOR(S): Podyminogin, Mikhail A.; Lukhtanov, Eugeny A.; Reed, Michael W.
CORPORATE SOURCE: Epoch Biosciences, Bothell, WA, 98021, USA
SOURCE: Nucleic Acids Research (2001), 29(24), 5090-5098
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Attachment of oligodeoxynucleotides (ODNs) contg. benzaldehyde (BAL) groups to semicarbazide-coated glass (SC-glass) slides is described. 5'-BAL-ODNs are prepd. using automated DNA synthesis and an acetal-protected BAL phosphoramidite reagent. The hydrophobic protecting group simplifies purifn. of BAL-ODNs by reverse phase HPLC and is easily removed using std. acid treatment. The electrophilic BAL-ODNs are stable in soln., but react specifically with semicarbazide groups to give semicarbazide silane to give SC-glass. BAL-ODNs are coupled to the SC-glass surface by a simple one-step procedure that allows rapid, efficient and stable attachment. Hand-spotted arrays of BAL-ODNs were prepd. to evaluate loading d. and hybridization properties of **immobilized** probes. Hybridization to radiolabeled target strands shows that at least 30% of the coupled ODNs were available for hybridization at max. **immobilization** d. The array was used to probe single nucleotide polymorphisms in synthetic DNA targets, and PCR products were correctly genotyped using the same macroarray. Application of this chem. to manufa. of DNA microarrays for sequence anal. is discussed.
IT **106868-88-6P**
RL: RCT (Reactant); SFN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(attachment of benzaldehyde-modified oligodeoxynucleotide probes to semicarbazide-coated glass)
RN 106868-88-6 HCAPLUS
CN Hydrazinecarboxamide, N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:843748 HCAPLUS
DOCUMENT NUMBER: 135:371103
TITLE: Water dispersion compositions useful as coatings of metals especially automobiles
INVENTOR(S): Yamauchi, Toyoaki; Takanohashi, Hiroaki; Takada, Yoshihiko

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

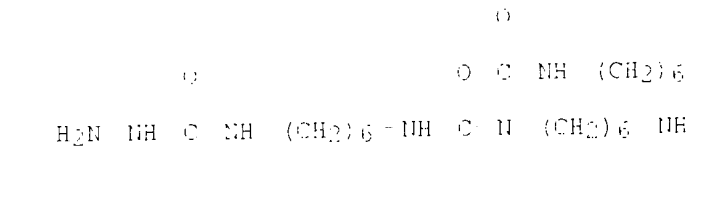
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001303013	A	20011120	JP 2000-139946	20000512

PRIORITY APPLN. INFO.: JP 2000-139946 20000512

AB Title compns. comprise (i) carbonyl group-contg. aq. film forming resins comprising aq. polycarbonyl compds. and (ii) thermal **crosslinking** agents. The compns. are useful as intermediate and/or top base coatings for automobiles, esp. as three coat-one bake, and give coating films with good appearance. Thus, (a) an intermediate water resistant coating compn., (b) a white top base water resistant coating compn., both comprising aq. polycarbonyl compd. obtained from Bu acrylate, diacetone acrylamide, 2-hydroxyethyl methacrylate, methacrylic acid, Me methacrylate, styrene, 2,2-azobis(2,4-dimethylvaleronitrile), and N,N-dimethylethanolamine, aq. film forming resin obtained from Bu acrylate, diacetone acrylamide, 2-hydroxyethyl methacrylate, Latemul S 180A, methacrylic acid, Me methacrylate, trimethylolpropane triacrylate, N,N-dimethylethanolamine, and ammonia, and Cymel 254, and (c) an acrylic clear coating compn. were applied on an electrodeposited coated plate (wet on wet method), electrostatically coated, and baked at 150.degree. for 25 min to give a coating film with good appearance.

IT **175870-12-9P**
PL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(water dispersion intermediate and/or top base coating compns. giving cured coating films with good appearance)

RN 175870-12-9 HCAPLUS
CN 1,9,11,13,20-Pentaazaheneicosanediamic acid, 11-[6-[(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide (9CI) (CA INDEX NAME)



IT **374620-65-2P 374620-67-4P 374620-76-5P**
PL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water dispersion intermediate and/or top base coating compns. giving cured coating films with good appearance)

RN 374620-65-2 HCAPLUS
CN 1,9,11,13,20-Pentaazaheneicosanediamic acid, 11-[6-[(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide, polymer with butyl 2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, ethenylbenzene, 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, formaldehyde, 2-hydroxyethyl 2-methyl-2-propenoate, Latemul S 180A, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid

and 1,3,5-triazine-2,4,6-triamine, ammonium salt, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0
CMF C4 H11 N O

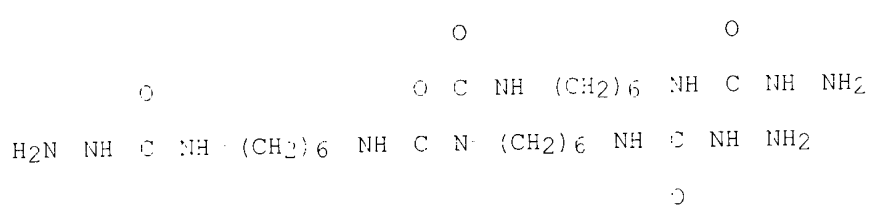
$Me_2N\ CH_2\ CH_2\ OH$

CM 2

CRN 374620-64-1
CMF (C23 H50 N12 O5 . C15 H20 O6 . C9 H15 N O2 . C8 H8 . C7 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2 . C3 H6 N6 . C H2 O . Unspecified)x
CCI RMS

CM 3

CRN 175870-12-9
CMF C23 H50 N12 O5



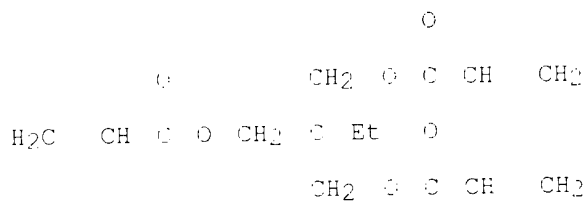
CM 4

CRN 113255-53-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

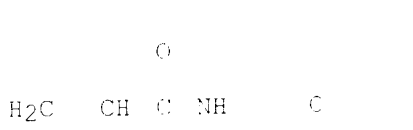
CM 5

CRN 15625-89-5
CMF C15 H20 O6



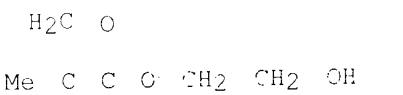
CM 6

CRN 2873-97-4
CMF C9 H15 N O2



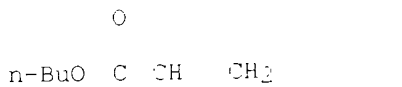
CM 7

CRN 868-77-9
CMF C6 H10 O3



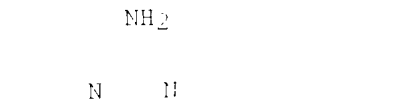
CM 8

CRN 141-32-2
CMF C7 H12 O2



CM 9

CRN 108-78-1
CMF C3 H6 N6



CM 10

CRN 100-42-5
CMF C8 H8

H_2C CH Ph

CM 11

CRN 80-62-6
CMF C5 H8 O2

H_2C C

Me C O OMe

CM 12

CRN 79-41-4
CMF C4 H6 O2

CH_2

Me C CO_2H

CM 13

CRN 50-00-0
CMF C H2 O

H_2C O

RN 574620-67-4 HCAPLUS
CN 2,9,11,13,20-Pentaazaheneicosanedioic acid, 11-[6-[(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide, polymer with butyl 2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, ethenylbenzene, formaldehyde, 2-hydroxyethyl 2-methyl-2-propenoate, Latemul S 180A, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-triazine-2,4,6-triamine, ammonium salt, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0
CMF C4 H11 N O

Me_2N CH_2 CH_2 OH

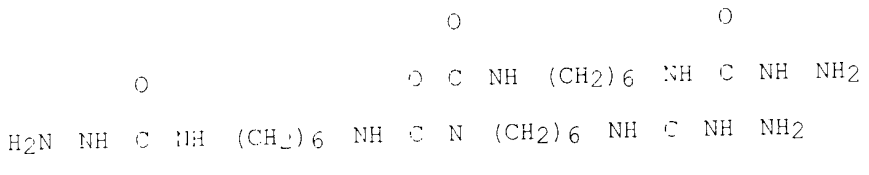
CM 2

CRN 574620-66-3

CMF (C23 H50 N12 O5 . C9 H15 N O2 . C8 H8 . C7 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2 . C3 H6 N6 . C H2 O . Unspecified)x
CCI PMS

CM 3

CRN 175370-12-9
CMF C23 H50 N12 O5



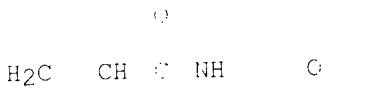
CM 4

CRN 111255-53-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

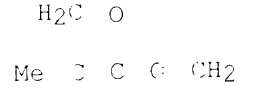
CM 5

CRN 2873-97-4
CMF C9 H15 N O2



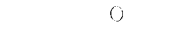
CM 6

CRN 868-77-9
CMF C6 H10 O3



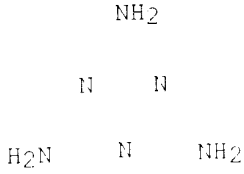
CM 7

CRN 141-32-2
CMF C7 H12 O2



CM 8

CRN 108-78-1
CMF C3 H6 N6

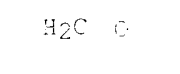


CM 9

CRN 100-42-5
CMF C8 H8

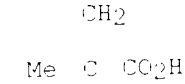
CM 10

CRN 80-62-6
CMF C5 H8 O2



CM 11

CRN 79-41-4
CMF C4 H6 O2



CM 12

CRN 50-00-0

CMF C H2 O

H_2C O

RN 374620-76-5 HCAPLUS
CN 2,9,12,14,20-Pentaazaheneicosanedioic acid, 11-[6-[(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide, polymer with [(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide, polymer with 1,1-dimethylethyl 2-propenoate, cyclohexyl 2-methyl-2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, formaldehyde, 2-hydroxyethyl 2-methyl-2-propenoate, Latemul S 180A, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid and 1,3,5-triazine-2,4,6-triamine, ammonium salt, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 108-01-0
CMF C4 H11 N O

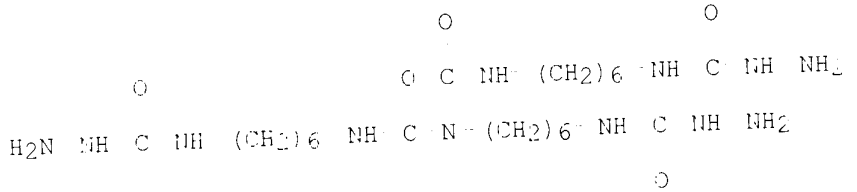
Me_2N CH_2 CH_2 OH

CM 2

CRN 374620-73-4
CMF (C22 H50 N12 O5 . C10 H16 O2 . C9 H15 N O2 . C7 H12 O2 . C6 H10 O3 . C5 H8 O2 . C4 H6 O2 . C3 H6 N6 . C H2 O . Unspecified)x
CCI PMS

CM 3

CRN 105470-13-9
CMF C22 H50 N12 O5



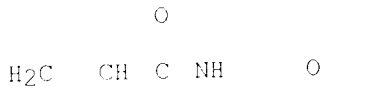
CM 4

CRN 113255-53-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 5

CRN 2873-97-4
CMF C9 H15 N O2

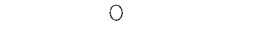


CM 6

CRN 868-77-9
CMF C6 H10 O3

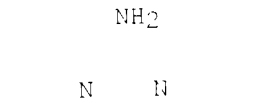
CM 7

CRN 141-32-2
CMF C7 H12 O2



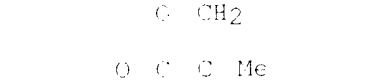
CM 8

CRN 108-78-1
CMF C3 H6 N6



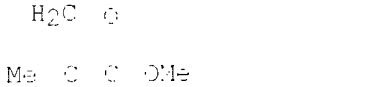
CM 9

CRN 101-43-9
CMF C10 H16 O2



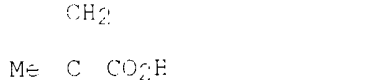
CM 10

CRN 80-62-6
CMF C5 H8 O2



CM 11

CRN 79-41-4
CMF C4 H6 O2



CM 12

CRN 50-00-0
CMF C H2 O

L9 ANSWER 3 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:713305 HCAPLUS
DOCUMENT NUMBER: 135:272864
TITLE: Hydrazine-based and carbonyl-based **bifunctional crosslinking** reagents for biomolecules, drugs, and synthetic polymers
INVENTOR(S): Schwartz, David A.
PATENT ASSIGNEE(S): Solulink, Inc., USA
SOURCE: PCT Int. Appl., 97 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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WO 2001070685     A2    20010927           WO 2001-US9252    20010322
WO 2001070685     A3    20030327
    W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
       CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,
       HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
       LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,
       RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
       VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
    RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
       DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
       BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2003013857     A1    20030116           US 2001-815978    20010322
EP 1315693        A2    20030604           EP 2001-920666    20010322
    R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
       IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRIORITY APPLN. INFO.:                     US 2000-191286P  P  20000322
                                           WO 2001-US9252   W  20010322
OTHER SOURCE(S):          MARPAT 135:272864
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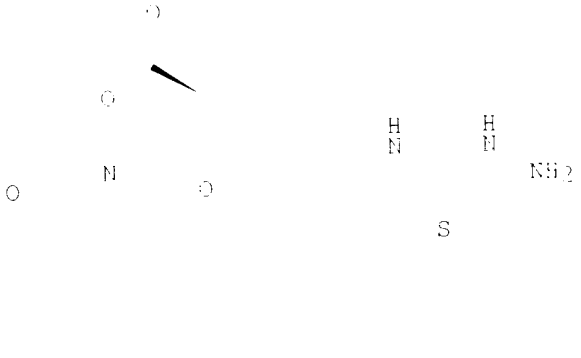
AB Reagents and methods are provided for **bifunctional crosslinking** and **immobilizing** biomols., drugs, and synthetic polymers. The reagents of formula BFA(HNHB?)a?L.HX [wherein A = NH?, NHCS, NHNHCO, NHNHCS, or a direct bond; B = an amino or thio reactive moiety; F = specified aliph. divalent groups contg. any combination of cycloalkylene, C(R10)2, CR10:CR10, C:CR12R13, CR12R13, C.tplbond.C, O, SOa, NR10, N=R12R13, CL, etc.; a = 0-2; r = 0-3; G = O or NR10; L = S, O, or NR10; R10 = specified monovalent groups; R12 and R13 = independently H, (cyclo)alkyl, alkenyl, alkynyl, or (hetero)aryl; or R12 and R13 together from (cyclo)alkylene or alkenylene; X = neg. counterion; or a deriv. thereof] possess a thiol or amino reactive group and a hydrazino or oxyamino moiety. **Conjugates** and **immobilized** biomols. are also provided. For example, hydrazinonicotinic acid was converted to the acetone hydrazone and treated with N-hydroxysuccinimide to give the **crosslinking** agent, succinimidyl 6-hydrazinonicotinate acetone hydrazone (I), in 33% yield. A soln. of ovalbumin in PBS and EDTA was added to a soln. of I in DMF and the mixt. incubated at room temp. for 4 h to afford the hydrazine-modified protein, which exhibited a molar extinction coeff. of 22,000 at 360 nm.

IT **362522-51-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(**crosslinking** agent; prepn. of hydrazine- and carbonyl-based **bifunctional crosslinking** agents and use with biomols., drugs, and synthetic polymers)

RN 362522-51-8 HCAPLUS

CN Hydrazinecarbothioamide, N-[[trans-4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]cyclohexyl]methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L9 ANSWER 4 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:647396 HCAPLUS
DOCUMENT NUMBER: 134:148166
TITLE: Preparation of a coating, a coated substrate, an adhesive, a film or sheet, and the coating mixture to be used
INVENTOR(S): Hesselmans, Laurentius Cornelius Josephus; Spek, Dirk Pieter
PATENT ASSIGNEE(S): Stahl International B.V., Neth.
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001023451	A2	20010405	WO 2000-NL699	20000929
WO 2001023451	A3	20011025		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, ML, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

NL 1013179	C2	20010402	NL 1999-1013179	19990930
EP 1133991	A2	20010918	EP 2000-970320	20000929

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL

BR 2000014669	A	20021001	BR 2000-14669	20000929
JP 2003510431	T2	20030318	JP 2001-526998	20000929

PRIORITY APPLN. INFO.: NL 1999-1013179 A 19990930
WO 2000-NL699 W 20000929

AB In this process, a mixt. of a polyisocyanate functional, a polyepoxide functional, a polyanhydride functional or a polyketone functional compd. or polymer and a compd. contg. reactive H, in which the compd. contg. reactive H is dispersed in a nonreactive matrix, which mixt. is not or low reactive at ambient conditions and highly reactive under selected

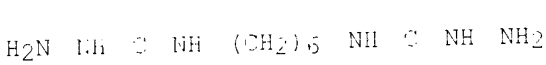
conditions, is applied onto a substrate at ambient temp., followed by heating. At ambient temp. the compd. contg. reactive H is a solid material, a powder, a granule, a flake or grind or a ground mixt. The coatings, coated substrates, adhesives, films, sheets, impregnated substrates, synthetic leathers, in-mold coatings, coated leathers, coated poly(vinyl chloride), coated nonwovens, coated coagulated polyurethane substrates, breathable coated substrates, are obtained by applying the the title process.

IT **332421-29-1P 332421-30-4P**
PL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coating or film; for coating, adhesive, a film or sheet formulated from a reactive mixt. of long pot life, fast reaction, and low toxic vapors)

RN 332421-29-1 HCAPLUS
CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, N,N'-1,6-hexanediylbis[hydrazinecarboxamide] and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

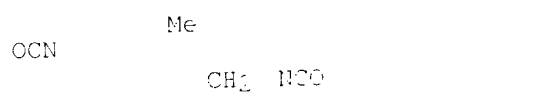
CM 1

CRN 51440-70-1
CMF C9 H20 N6 O2



CM 2

CRN 4098-71-9
CMF C12 H16 N2 O2

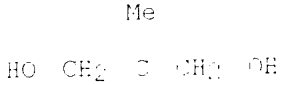


CM 3

CRN 629-11-5
CMF C6 H14 O2

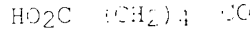
CM 4

CRN 126-30-7
CMF C5 H12 O2



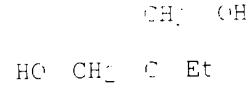
CM 5

CRN 124-04-9
CMF C6 H10 O4



CM 6

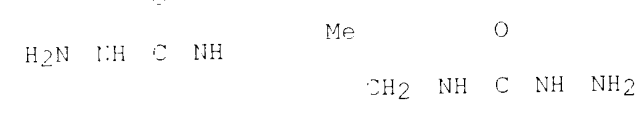
CRN 77-99-6
CMF C6 H14 O3



RN 330421-30-4 HCAPLUS
CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 1,6-hexanediol, N-[3-[[(hydrazinocarbonyl)amino]methyl]-3,5,5-trimethylcyclohexyl]hydrazinecarboxamide and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

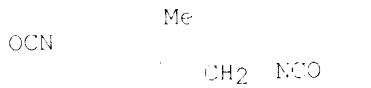
CM 1

CRN 52284-45-4
CMF C12 H26 N6 O2



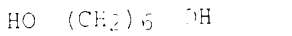
CM 2

CRN 4098-71-9
CMF C13 H18 N2 O2



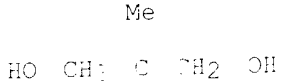
CM 3

CRN 629-11-8
CMF C6 H14 O2



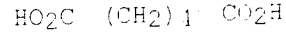
CM 4

CRN 116-30-7
CMF C5 H12 O2



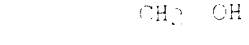
CM 5

CRN 124-04-9
CMF C6 H10 O4



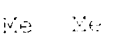
CM 6

CRN 77-99-6
CMF C6 H14 O3

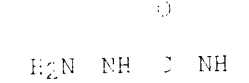


IT **51440-70-1P 52284-45-4P**
RL: IMF (Industrial manufacture); FCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(curative; for coating, adhesive, a film or sheet formulated from a reactive mixt. of long pot life, fast reaction, and low toxic vapors)
RN 51440-70-1 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,6-hexanediylbis- (9CI) (CA INDEX NAME)

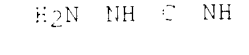
RN 52284-45-4 HCAPLUS
CN Hydrazinecarboxamide, N-[3-[[(hydrazinocarbonyl)amino]methyl]-3,5,5-trimethylcyclohexyl]- (9CI) (CA INDEX NAME)



IT **32251-26-6 126953-51-3 332421-34-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(curative; for coating, adhesive, a film or sheet formulated from a reactive mixt. of long pot life, fast reaction, and low toxic vapors)
RN 32251-26-6 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis- (9CI) (CA INDEX NAME)



RN 126953-51-3 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,3-propanediylbis- (9CI) (CA INDEX NAME)



RN 332421-34-8 HCAPLUS

CN Hydrazinecarboxamide, N,N'-1,4-butanediylbis- (9CI) (CA INDEX NAME)

L9 ANSWER 5 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:167451 HCAPLUS
DOCUMENT NUMBER: 134:198056
TITLE: Radiopharmaceutical products and their preparation procedure
INVENTOR(S): Bellande, Emmanuel; Jallet, Pierre; Peninon, Benoit
PATENT ASSIGNEE(S): Cis Bio International, Fr.
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001015746	A1	20010308	WO 2000-IB1161	20000823
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FR 2797769	A1	20010302	FR 1999-10970	19990901
BR 2000013729	A	20020507	BR 2000-13729	20000823
EP 1210127	A1	20020605	EP 2000-951784	20000823
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003508499	T2	20030304	JP 2001-520157	20000823
EE 200200105	A	20030415	EE 2002-105	20000823
BG 106434	A	20020930	BG 2002-106438	20020226
NO 2002001001	A	20020411	NO 2002-1001	20020226
PRIORITY APPLN. INFO.:			FR 1999-10970 A	19990901
			WO 2000-IB1161 W	20000823

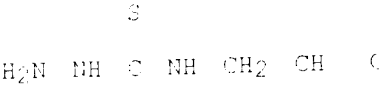
OTHER SOURCE(S): MARPAT 134:198056

AB The present invention relates to radiopharmaceutical products and their prepn. procedure. These products can be used for pulmonary scintigraphy or for therapy. They comprise a polysaccharide and sequestering groups of formulas R-NH-, R-NR', and R-N(R').N= in which R is a hydrocarbon or arom. group comprising at least one atom of sulfur, and R' is an atom of hydrogen or an alkyl grouping such as Me, said sequestering groups forming a chelate type complex with a radioactive metal such as technetium.

IT **3766-55-0DP**, 4-Allyl 3-thiosemicarbazide, radiolabeled reaction product with oxidized starch **6610-29-3DP**, 4-Methyl 3-thiosemicarbazide, radiolabeled reaction product with oxidized starch
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

(radiopharmaceutical kits for scintigraphy)

RN 3766-55-0 HCAPLUS
CN Hydrazinecarbothioamide, N-2-propenyl- (9CI) (CA INDEX NAME)



RN 6610-29-2 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:114047 HCAPLUS
DOCUMENT NUMBER: 130:200010
TITLE: Lightweight cellular concrete having waterproof coatings and its preparation
INVENTOR(S): Ito, Yasuyuki; Watanabe, Tomoiya; Nakanishi, Masuhiko
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

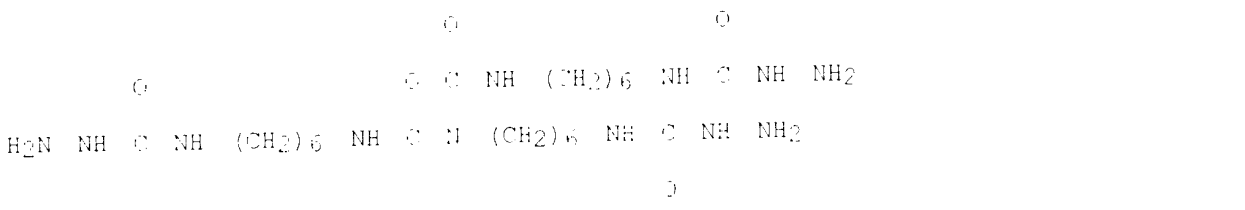
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11043385	A2	19990216	JP 1997-198765	19970724

PRIORITY APPLN. INFO.: JP 1997-198765 19970724

AB The prepn. involves the following steps; (1) impregnating lightweight cellular concrete with an aq. soln. contg. a hardenable resin which shows water soly. before cross linking, (2) **crosslinking** the resin, and (3) forming a coating on the surface. The aq. soln. may contain a hardening agent. The resulting concrete products are also claimed.

IT **175870-12-9P**
PL: INF (Industrial manufacture); MOA (Modifier or additive use); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(**crosslinking** agent; prepn. of lightweight cellular concrete having **crosslinked** polymer layers and waterproofing coating layers)

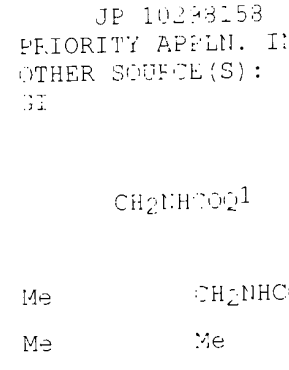
RN 175870-12-9 HCAPLUS
CN 2,9,11,13,20-Pentaazaheneicosanedioic acid, 11-[6-[(hydrazinocarbonyl)amino]hexyl]-10,12-dioxo-, dihydrazide (9CI) (CA INDEX NAME)



L9 ANSWER 7 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:724187 HCAPLUS
DOCUMENT NUMBER: 130:14992
TITLE: Isophoronebis(semicarbazides), their preparation, their semicarbazones, and room-temperature-curable water-resistant coating compositions with good storage stability containing them
INVENTOR(S): Yokota, Masahisa; Miyazaki, Takayuki; Ueyanagi, Kaoru
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10298158	A2	19981110	JP 1997-120103	19970424
PRIORITY APPLN. INFO.:			JP 1997-120103	19970424
OTHER SOURCE(S):		MARPAT 130:14992		

GI

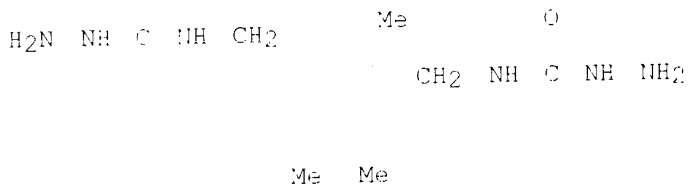


AB The semicarbazides I [Q1, Q2 = NR3NH2 (R3 = H, C1-20 alkyl, alicyclic group, aryl), NHNR3R4NR3NH2 (R4 = linear or branched C2-20 alkylene, C5-20 cycloalkylene, C6-10 arylene which may be substituted with C1-8 alkyl or alkoxy), NHNR3COR4CONR3NH2, NHNR3CO(NHNH)xCONHNH2 (x = 1-5), NHNR3CONHR4NHCONR3NH2] are prepd. by treatment of isophorone diisocyanate and hydrazines. Semicarbazones are prepd. by treatment of I with R1R2CO (R1, R2 = H, linear or branched C2-20 aliph. group, C5-20 alicyclic group, (un)substituted aryl; R1 and R2 may be bonded to each other forming a ring). The coating compns. contain (A) I, and/or (B) the above semicarbazones, and (C) polycarbonyl compds. at (C)/[(A)+(B)] = 99.9:0.1-10/90. The compns. provide coating having high hardness and good waterproofness. An aq. emulsion contained methacrylic acid-Me methacrylate-Bu acrylate-diacetone acrylamide copolymer and isophorone bis(semicarbazide).

IT **216143-35-0P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); RCT

(Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of isophoronebis(semicarbazides) as **crosslinking** agents for room-temp.-curable coating compns. for high hardness and good waterproofness)

RN 216143-35-0 HCAPLUS
CN Hydrazinecarboxamide, N,N'-[(1,5,5-trimethyl-1,3-cyclohexanediyl)bis(methylene)]bis- (9CI) (CA INDEX NAME)

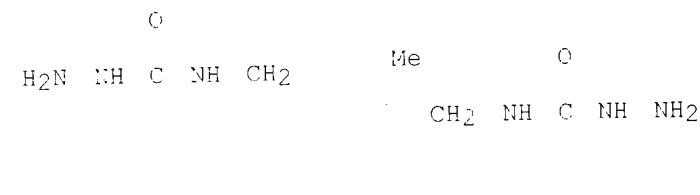


IT **216143-36-1P**
PL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(prepn. of isophoronebis(semicarbazides) as **crosslinking** agents for room-temp.-curable coating compns. for high hardness and good waterproofness)

RN 216143-36-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, methyl 2-methyl-2-propenoate and N,N'-[(1,5,5-trimethyl-1,3-cyclohexanediyl)bis(methylene)]bis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

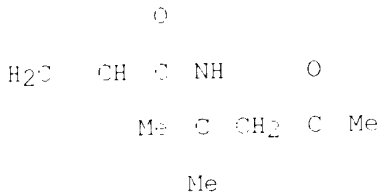
CM 1

CRN 216143-35-0
CMF C18 H32 N6 O2



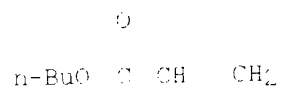
CM 2

CRN 2873-97-4
CMF C9 H15 N O2



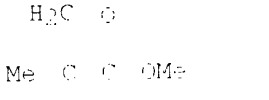
CM 3

CRN 141-32-2
CMF C7 H12 O2



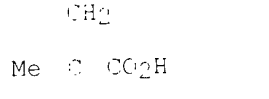
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

CRN 79-41-4
CMF C4 H6 O2



L9 ANSWER 8 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:112262 HCAPLUS
DOCUMENT NUMBER: 128:196654
TITLE: Polypeptides having a single covalently bound N-terminal water-soluble polymer
INVENTOR(S): Wei, Ziping; Menon-rudolph, Sunitha; Ghosh-Dastidar, Pradip
PATENT ASSIGNEE(S): Ortho Pharmaceutical Corp., USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9815563	A2	19980416	WO 1997-US13756	19970801
WO 9815563	A3	19980507		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9738055	A1	19980225	AU 1997-38055	19970801
BR 9711009	A	19990817	BR 1997-11009	19970801
CN 1226176	A	19990818	CN 1997-196829	19970801
EP 904702	A2	19990324	EP 1997-936407	19970901

F: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI

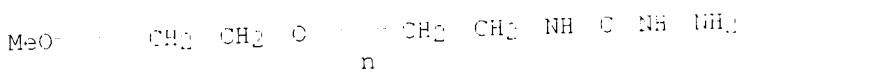
NZ 333993	A	20000128	NZ 1997-333993	19970801
JP 2000515553	T2	20001121	JP 1998-508173	19970801
RU 2199547	C2	20030227	RU 1999-103679	19970801
NO 9900465	A	19990329	NO 1999-465	19990201
MX 9901184	A	20000301	MX 1999-1184	19990201
			US 1996-23035P	P 19960802
			WO 1997-US13756	W 19970801

PRIORITY APPLN. INFO.:

AB This invention provides compns. consisting essentially of a polypeptide such as erythropoietin and a water-sol. polymer such as PEG covalently bound thereto at the N-terminal .alpha.-carbon atom via a hydrazone or reduced hydrazone bond, or an oxime or reduced oxime bond. This invention also provides methods of making the instant compns., pharmaceutical compns. comprising same, and kits for use in prepg. same.

IT **167394-62-9**
PL: PRT (Reactant); RACT (Reactant or reagent)
(polypeptides having a single covalently bound N-terminal water-sol. polymer)

RN 167394-62-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(hydrazinocarbonyl)amino]ethyl]-.omega.-methoxy- (9CI) (CA INDEX NAME)



L9 ANSWER 9 OF 36 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:380480 HCAPLUS
DOCUMENT NUMBER: 127:2745
TITLE: Reagent for the detection and isolation of carbohydrates or glycan receptors
INVENTOR(S): Watzele, Manfred; Fernholz, Erhard; Von Der Eltz, Herbert
PATENT ASSIGNEE(S): Boehringer Mannheim Gmbh, Germany
SOURCE: Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 799490	A1	19970423	EP 1996-116773	19961018
EP 799490	B1	20011219		
R: DE, ES, FR, GB, IT				
DE 19539008	A1	19970424	DE 1995-19539008	19951019
US 6218546	B1	20010417	US 1996-733736	19961018
JP 09176106	A2	19970708	JP 1996-277834	19961021

PRIORITY APPLN. INFO.: DE 1995-19539008 A 19951019
OTHER SOURCE(S): MARPAT 127:2745

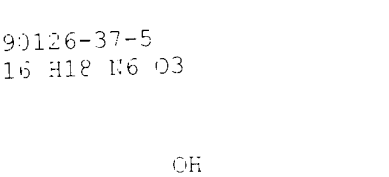
AB The finding concerns compds., which contain a chromophore and a ligand (e.g., biotin or a biotin deriv.) that can bind to streptavidin and/or avidin, that are suitable for binding to mols. that contain an aldehyde, ketone, hemiacetal, and/or hemiketal function. The finding also concerns **conjugates** formed from these compds. as well as a method for detecting or isolating carbohydrates or glycan receptors by using such **conjugates**.

IT **190126-38-6P**
PL: ARG (Analytical reagent use); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); FACT (Reactant or reagent); USES (Uses)
(reagent for detecting and isolating carbohydrates or glycan receptors)

RN 190126-38-6 HCAPLUS
CN Hydrazinecarboxamide, N-[2-[[2-[(4-hydroxyphenyl)azo]benzoyl]amino]ethyl]-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

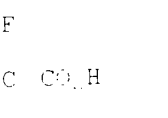
CM 1

CRN 190126-37-5
CMF C16 H18 N6 O3



CM 2

CRN 76-05-1
CMF C2 H F3 O2



L9 ANSWER 10 OF 38 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:[illegible] HCAPLUS
DOCUMENT NUMBER: 126:2[illegible]
TITLE: Di- and triaminoguanidines, and methods of use
INVENTOR(S): Wagle, Dilip R.; Ulrich, Peter C.; Cerami, Anthony
PATENT ASSIGNEE(S): Alteon Inc., USA; Rockefeller University
SOURCE: U.S., 12 pp., Cont.-in-part of U.S. Ser. No. 274,243, abandoned.
CODEN: [illegible]
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 33
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5612332	A	19970318	US 1995-487059	19950607
EP 322402	A2	19890629	EP 1989-102406	19850319
EP 322402	A3	19891025		
EP 322402	B1	19931124		
R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE				
AT 97741	E	19931215	AT 1989-102406	19850319
US 5140048	A	19920818	US 1990-605654	19901030
US 5126442	A	19920630	US 1991-6[illegible]	1991[illegible]
US 5[illegible]54[illegible]93	A	19931019	US 1991-[illegible]	1991[illegible]
JP 05172813	A2	19930713	JP 1992-[illegible]	1992[illegible]
US 5356895	A	19941018	US 1992-889141	19920527
WO 9313775	A1	19930722	WO 1993-US3[illegible]	19930115
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9335840	A1	19930803	AU 1993-35840	19930115
US 5811075	A	19980922	US 1995-487398	19950607
WO 9640663	A1	19961219	WO 1996-US9376	19960607
W: AU, CA, IL, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9661586	A1	1996[illegible]	AU 1996-61596	19960607
US 5852009	A	19981222	US 1997-784861	1997[illegible]
US 6114323	A	20000905	US 1998-215612	19981217
US 2002115724	A1	20020822	US 2001-954514	20010917

PRIORITY APPLN. INFO.:

US 1984-590810	A2	19840319
US 1985-798032	A1	19851114
US 1987-119958	A2	19871113
US 1988-264930	A2	19881102
US 1990-605654	A3	19901030
US 1992-889141	A3	19920527
US 1994-274243	B2	19940713
EP 1989-102406	A	19850319
US 1986-907747	B2	19860912
US 1987-91534	A3	19870903
US 1988-[illegible]20504	B2	19[illegible]0718
US 1989-453955	A3	1989[illegible]20
US 1989-453958	B1	1989[illegible]20
US 1990-481869	A2	19[illegible]0
US 1990-606415	A3	19901031
US 1991-[illegible]	B1	1991[illegible]03
US 1992-8[illegible]10	A	19920117
US 1992-878[illegible]	B1	19920505
WO 1993-US356	A	19930115
US 1993-161840	B1	19931203
US 1994-2[illegible]	B1	19940815
US 1995-487159	A	19950607

WO 1996-US9376 W 19960607
US 1997-784861 A1 19970116
US 1998-215612 A1 19981217
US 2000-561541 A3 20000423

OTHER SOURCE(S): MARPAT 126:182832

AB The present invention relates to compds., compns. and methods for inhibiting nonenzymic **crosslinking** (protein aging). Accordingly, a compn. is disclosed which comprises a di- or tri-aminoguanidine capable of inhibiting the formation of advanced glycosylation end products of target proteins. The method comprises contacting the target protein with the compn. Both industrial and therapeutic applications for the invention are envisioned, as food spoilage and animal protein aging can be treated.

IT **13431-34-0**, 4-Ethyl-3-thiosemicarbazide
RL: RCT (Reactant); RACT (Reactant or reagent)
(di- and triaminoguanidines and methods of use to prevent protein aging)

RN 13431-34-0 HCAPLUS
CN Hydrazinecarbothioamide, N-ethyl- (9CI) (CA INDEX NAME)

?

E1NH2 C NH NH2

L9 ANSWER 11 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:127504 HCAPLUS
DOCUMENT NUMBER: 126:129000
TITLE: Semicarbazide-containing linker compounds for formation of stably-linked **conjugates** and methods related thereto
INVENTOR(S): Bernhinger, Ronald W.; Ledge, Mark S.; Tarnowski, Stanley Joseph, Jr.
PATENT ASSIGNEE(S): Cellpro, Incorporated, USA
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640263	A2	19961219	WO 1996-US8983	19960604
WO 9640263	A3	19970417		
W: JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5856571	A	19990105	US 1995-486980	19950607

PRIORITY APPLN. INFO.: US 1995-486980 19950607
OTHER SOURCE(S): MARPAT 126:129000

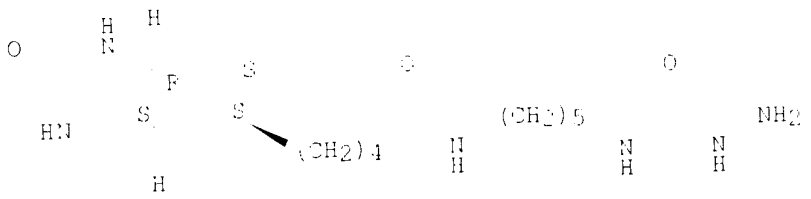
AB Linker compds. for formation of stably-linked **conjugates** are disclosed. Such linker compds. are semicarbazide-contg. linker compds. useful in forming **conjugates** having stable semicarbazone linkages. The stably-linked **conjugates** have utility in a variety of immunodiagnostic and sepn. techniques.

IT **186422-63-9P**
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(semicarbazide-contg. linker compds. for formation of stably-linked **conjugates** and methods related thereto)

RN 186422-63-9 HCAPLUS
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[5-[(hydrazinocarbonyl)amino]pentyl]hexahydro-2-oxo-, [3aS-(3a.alpha.,4.beta.,6a.alpha.)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L9 ANSWER 12 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:9948 HCAPLUS
DOCUMENT NUMBER: 126:128771
TITLE: Substituted thioureas as **bifunctional** chelators, their preparation, **conjugates** with peptides, proteins, and antibodies, and their use in imaging of tumors and thrombi
INVENTOR(S): Coughlin, Daniel J.; Belinka, Jr Benjamin A.
PATENT ASSIGNEE(S): Cytogen Corporation, USA
SOURCE: U.S., 32 pp., Cont.-in-part of U.S. 5,326,856.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5565468	A	19961217	US 1994-204197	19940627
US 5326856	A	19940705	US 1992-866375	19920409
WO 9321151	A1	19931028	WO 1993-US3208	19930408

W: CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1992-866375 19920409
WO 1993-US3208 19930408

OTHER SOURCE(S): MARPAT 126:128771
GI

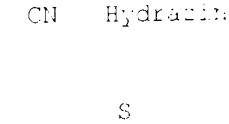
I

AB Chelating agents useful for coupling metal ions to biol. active mols. are disclosed. In particular, substantial thioureas for chelating metals, e.g. technetium, are provided that can be **conjugated** to a

targeting mol. such as an antibody, a peptide or a protein. Prepn. of the chelating agents of the invention, e.g. I, is described, as are **conjugation** to an antibody and to a peptide and use of the **conjugates** in tumor imaging and thrombus imaging.

IT **6610-29-3**, 4-Methyl-3-thiosemicarbazide
RL: PCT (Reactant); PACT (Reactant or reagent)
(reaction; substituted thioureas as **bifunctional** chelators, prepn., **conjugates** with peptides, proteins, and antibodies, and use in imaging of tumors and thrombi)

RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



L9 ANSWER 13 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:741467 HCAPLUS
DOCUMENT NUMBER: 126:4221
TITLE: Method of photochemical **immobilization** of ligands using quinones
INVENTOR(S): Jacobsen, Mogens Havsteen; Koch, Troels
PATENT ASSIGNEE(S): Jacobsen, Mogens, Havsteen, Den.
SOURCE: PCT Int. Appl., 96 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9631597	A1	19961010	WO 1996-DK167	19960403
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
CA 2217053	AA	19961010	CA 1996-2217053	19960403
AU 9653329	A1	19961023	AU 1996-53329	19960403
AU 699421	B2	19981203		
EP 820483	A1	19980128	EP 1996-909890	19960403
EP 820483	B1	20001213		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI				
JP 11505554	T2	19990521	JP 1996-529895	19960403
JP 3124037	B2	20010115		
AT 198079	E	20001215	AT 1996-909890	19960403
ES 2153097	T3	20010216	ES 1996-909890	19960403
US 6333384	A	20000307	US 1997-930623	19971007

PRIORITY APPLN. INFO.: DK 1995-425 A 19950407
WO 1996-DK167 W 19960403

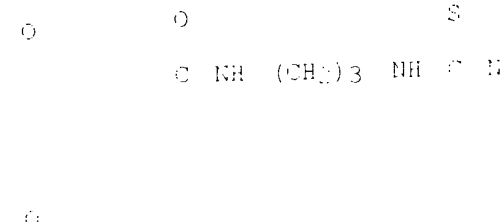
OTHER SOURCE(S): CASREACT 126:4221; MARPAT 126:4221

AB A method is disclosed for **immobilizing** a ligand on the surface of a carbon-contg. substrate material, said method comprising a photochem. step of linking a storeq.l photochem. reactive cmpds. to a carbon-contg.

material surface, wherein the photochem. reactive compd. is a quinone compd. contg. a cyclic hydrocarbon or 2-10 fused cyclic hydrocarbons, with at least 2 **conjugated** carbonyl groups, and wherein the photochem. step comprises irradn. of the photochem. reactive compd. with nonionizing electromagnetic radiation having a wavelength in the range from UV to visible light. The products of this invention can be used as, e.g., carriers for solid-phase immunoassays.

IT **172422-03-6P**
RL: BYP (Byproduct); SFN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(photochem. **immobilization** of ligands using quinones)

RN 172422-03-6 HCAPLUS
CN 2-Anthracenecarboxamide, N-[3-[(hydrazinothioxomethyl)amino]propyl]-9,10-dihydro-9,10-dioxo- (9CI) (CA INDEX NAME)



L9 ANSWER 14 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:319761 HCAPLUS
DOCUMENT NUMBER: 123:89553
TITLE: PEG hydrazone and PEG oxime linkage forming reagents and protein derivatives.
INVENTOR(S): Wright, David S.
PATENT ASSIGNEE(S): Ortho Pharmaceutical Corp., USA
SOURCE: Eur. Pat. Appl., 47 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

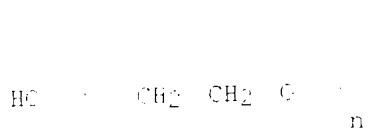
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 605963	A2	19940713	EP 1993-309835	19931207
EP 605963	A3	19951108		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CA 2110543	AA	19940610	CA 1993-2110543	19931202
FI 9305495	A	19940610	FI 1993-5495	19931208
NO 9304477	A	19940610	NO 1993-4477	19931208
ZA 9309214	A	19950608	ZA 1993-9214	19931208
AU 9352392	A1	19940623	AU 1993-52392	19931209
JP 07196635	A2	19950801	JP 1993-340709	19931209
PRIORITY APPLN. INFO.:			US 1992-987789	19921209
			US 1993-45051	19930407
			US 1993-157343	19931123

AB Compns. for modifying polypeptides with PEG or other water-sol. org. polymers are described. The water-sol. polymer reagents include hydrazine, hydrazine carboxylate, semicarbazole, thiosemicarbazide, carbonic acid dihydrazide, carbazide, thiocarbazide, and arylhydrazide derivs. as well as oxylamine derivs. of water-sol. org. polymers, such as

polyethylene glycol, polypropylene glycol, polyoxyethylated polyol, heparin, heparin fragments, dextran polysaccharides, polyamino acids, and polyvinyl alc. Kits for modifying polypeptides with the above water-sol. polymer reagents are also provided. Thus, erythropoietin was modified by oxidn. and treatment with monomethoxypolyoxyethylene semicarbazide and the product was sepd. by chromatog. The antigenicity and the effect on hematocrit levels of the above derivs. were demonstrated.

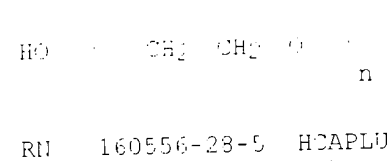
IT **160556-27-4DP**, reaction products with protein derivs.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and biol. activity of polyoxyethylene-coupled protein derivs.)

RN 160556-27-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(hydrazinocarbonyl)amino]ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)

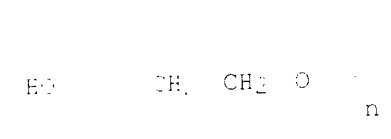


IT **160556-27-4P 160556-28-5P**
RL: BCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and biol. activity of polyoxyethylene-coupled protein derivs.)

RN 160556-27-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(hydrazinocarbonyl)amino]ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 160556-28-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-[2-[(hydrazinothioxomethyl)amino]ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



L9 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:95783 HCAPLUS
DOCUMENT NUMBER: 120:95783
TITLE: Inhibitors of thrombosis
INVENTOR(S): Vlasuk, Georg Phillip; Webb, Thomas Roy; Pearson, Daniel Andrew
PATENT ASSIGNEE(S): Corvas International, Inc., USA
SOURCE: PCT Int. Appl., 87 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9317756	A1	19930819	WO 1993-US1307	19930212
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 627929	A1	19941214	EP 1993-905930	19930212
EP 627929	B1	19980930		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 07503961	T2	19950427	JP 1993-514315	19930212
JP 3194953	B2	20010806		
AT 171709	E	19981015	AT 1993-905930	19930212
CA 2129339	C	20020910	CA 1993-2129339	19930212

PRIORITY APPLN. INFO.: US 1992-836123 A 19920214
WO 1993-US1307 W 19930212

OTHER SOURCE(S): MARPAT 120:95783

AB Peptide aldehyde analogs, AcR-AA-L-Pro-Arg-al (AcR = hydrophobic acyl group; AA = Glu, Asp, or equiv.), inhibit thrombin or Factor Xa and are thus useful for preventing or treating conditions in mammals characterized by abnormal thrombosis. N-(3-phenylpropanyl)-L-Asp-L-Pro-L-argininal (prepn. given) inhibited thrombin, Factor Xa, and plasmin with IC50 values of 284, 91.5, and 326 nM, resp., and showed antithrombotic activity in a rat model.

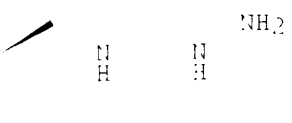
IT **139976-29-7P 151275-26-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in prepn. of antithrombotic peptide aldehyde analog)

RN 139976-29-7 HCAPLUS
CN Cyclohexanecarboxylic acid, 4-[[(hydrazinocarbonyl)amino]methyl]-, trans-, monc(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

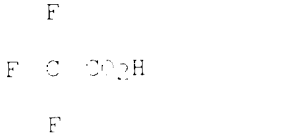
CRN 139976-28-6
CMF C9 H17 N3 O3

Relative stereochemistry.



CM 2

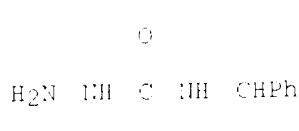
CRN 76-05-1
CMF C2 H F3 O2



RN 111275-26-2 HCAPLUS
CN Hydrazinecarboxamide, N-(diphenylmethyl)-, mono(trifluoracetate) (9CI) (CA INDEX NAME)

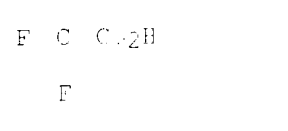
CM 1

CRN 100908-39-7
CMF C14 H15 N3 O



CM 2

CRN 76-05-1
CMF C2 H F3 O2

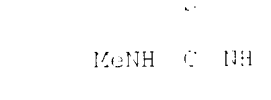


L9 ANSWER 16 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:49591 HCAPLUS
DOCUMENT NUMBER: 120:49591
TITLE: Substituted thioureas as **bifunctional** chelators for **conjugation** to antibodies or other biological targeting molecules
INVENTOR(S): Coughlin, Daniel J.; Belinka, Benjamin A., Jr.
PATENT ASSIGNEE(S): Cytogen Corp., USA
SOURCE: PCT Int. Appl., 89 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9311151	A1	19931010	WO 1993-US3208	19930408
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5326856	A	19940705	US 1992-866375	19920409
EP 635001	A1	19950125	EP 1993-911534	19930408

EP 63[illegible]01 B1 19970820
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
JP 6[illegible]240 T2 19960[illegible] JP 1993-518423 19930303
AT 1[illegible]94 E 19[illegible] AT 1993-911594 19930303
ES 2[illegible]95 T3 19[illegible] ES 1993-911594 19930303
US 5[illegible]468 A 19961217 US 1994-204197 19940223
US 5[illegible]885 A 19960618 US 1994-268443 19940630
PRIORITY APPLN. INFO.: US 1992-846377 19920303
WO 1993-US1906 19930303

OTHER SOURCE(S): MARPAT 120:49501
AB The title chelating agents are LD[NHC(:S)NHR][L [L = linker; D = (cyclo)alkyl, aryl; R = H, (NH)a(CH2)b(C:Y)c(NH)d(CH2)eZ (a = 0, 1; b, e = 0-10; c = 0, 1 (if c = 1, Y = S, O, H2); d = 0-2; Z = H, SO3H, CO2H,, OH, H2PO3, N+(R')3X- (R' = C1-4 alkyl; X- = counterion, such as halide or acid anion)]; the chelating agents are useful for coupling metal ions to biol. active mols. (antibodies, peptides, etc.). Prepn. of several chelating agents of the invention is described. Thus, 3,5-di-(1-trimethylammoniumacetyl)-4-thiosemicarbazidobenzoic acid dichloride salt (I) was prepd. from 3,5-diisothiocyanatobenzoic acid (prepn. given) and (carboxymethyl)trimethylammonium chloride hydrazide. I was **conjugated** to a peptide (SYRGLVRSDF-NH2), and the **conjugate** was labeled with 99mTc. The labeled peptide **conjugate** was used in the imaging of thrombi in rabbits. Prepn. and use in tumor imaging of a labeled antibody **conjugate** is also described.
IT **6610-29-3**, 4-Methyl-3-thiosemicarbazide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in **bifunctional** substituted thiourea chelating agent prepn.)
RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



MeNH C NH NH2

L9 ANSWER 17 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1993:617414 HCAPLUS
DOCUMENT NUMBER: 119:217414
TITLE: Peptide aldehyde analogs for trypsin inhibitors
INVENTOR(S): Brunck, Terence Kevin; Bepe, Michael Gary; Pearson, Daniel Andrew; Webb, Thomas Roy
PATENT ASSIGNEE(S): Corvas International, Inc., USA
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9314779	A1	19930805	WO 1993-US906	19930129
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 6[illegible]25	A1	19941214	EP 1993-905776	19930129
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				

JP 07503715	T2	19950420	JP 1993-513488	19930109
US 5534498	A	19960709	US 1993-11666	19930129
PRIORITY APPLN. INFO.:			US 1992-828388	19920130
			US 1993-11666	19930129
			WO 1993-US906	19930129

OTHER SOURCE(S): MARPAT 119:217414

AB Peptide aldehyde analogs are disclosed which have substantial potency and specificity as inhibitors of mammalian pancreatic trypsin. The compds. of the invention are useful in the prevention and treatment of tissue damage or destruction assocd. with pancreatitis. Prepn. of the analogs is described. Thus, N-t-butoxycarbonyl-L-Asp-L-Pro-L-argininal (I) (prepn. given) had a Ki against trypsin of 0.00045 .mu.M. The effectiveness of I in an animal model for pancreatitis was also demonstrated.

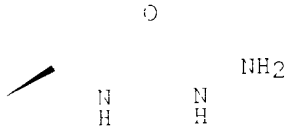
IT **139976-29-7P 150908-39-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in peptide aldehyde analog prepn. for trypsin inhibitor)

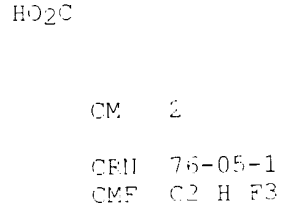
RN 139976-29-7 HCAPLUS
CN Cyclohexanecarboxylic acid, 4-[[(hydrazinocarbonyl)amino]methyl]-, trans-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 139976-28-6
CMF C9 H17 N3 O3

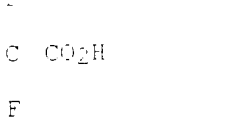
Relative stereochemistry.



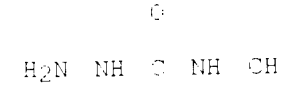


CM 2

CRN 76-05-1
CMF C2 H F3 O2



RN 150908-39-7 HCAPLUS
CN Hydrazinecarboxamide, N-(diphenylmethyl)- (9CI) (CA INDEX NAME)

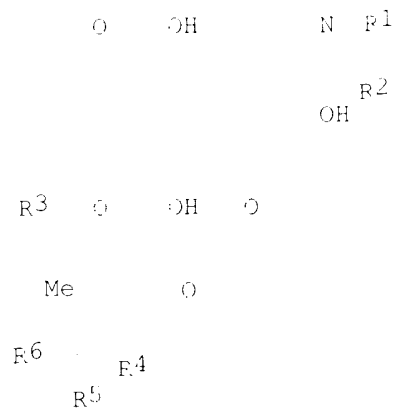


L9 ANSWER 18 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:214841 HCAPLUS
DOCUMENT NUMBER: 116:214841
TITLE: Preparation of anthracycline **immunoconjugates** as neoplasm inhibitors
INVENTOR(S): Kaneko, Takushi; Willner, David; Monkovic, Ivo; Greenfield, Robert S.; Braslawsky, Gary R.
PATENT ASSIGNEE(S): Bristol-Myers Squibb Co., USA
SOURCE: Eur. Pat. Appl., 45 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 457650	A2	19911121	EP 1991-107737	19910513
EP 457650	A3	19920701		
EP 457650	B1	19990714		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5122377	A	19920611	US 1990-522996	19900514
US 5137877	B1	19960130		
AU 9176038	A1	19911114	AU 1991-76038	19910403
AU 646830	B2	19940310		
FI 9102285	A	19911115	FI 1991-2285	19910510
JP 04356765	A2	19921207	JP 1991-199757	19910510
JP 3010319	B2	20000221		
ZA 9103591	A	19920226	ZA 1991-3591	19910513
AT 182141	E	19990715	AT 1991-107737	19910513
ES 2134761	T3	19991016	ES 1991-107737	19910513
CA 2042503	AA	19911115	CA 1991-2042503	19910514
CA 2042503	C	20020723		
US 5340906	A	19940823	US 1992-865062	19920408
JP 2000026404	A2	20000125	JP 1999-131583	19990512
JP 3234480	B2	20011204		

PRIORITY APPLN. INFO.: US 1990-522996 A 19900514
JP 1991-199757 A3 19910510

OTHER SOURCE(S): MARPAT 116:214841
GI

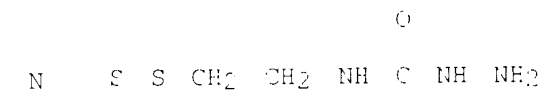


I

AB Anthracycline derivs. I [R1 = NHCONH(CH2)nSSR8, NHCONHNHCONH(CH2)nSSR8, NHCSNH(CH2)mCH:CH(CH2)nSSR8, NHCO2(CH2)nSSR8, NHArCONH(CH2)nSSR8, etc.; m, n = 1-10; R8 = (substituted) 2-pyridyl, -phenyl; Ar = phenylene; R2 = Me, CH2OH, CH2OCO(CH2)3Me, CH2OCOCH(OEt)2; R3 = OMe, OH, H; R4 = NH2 NHCOCF3, 4-morpholinyl, 3-cyano-4-morpholinyl, 1-piperidinyl, NHCH2Ph, N(CH2Ph)2, etc.; R5 = OH, tetrahydropyranyloxy, H; R6 = OH, H; R6 .noteq. OH when R5 = OH or tetrahydropyranyloxy], related compds., and their **conjugates** with ligands and antibodies, were prepd. Thus, 1-amino-4-[(2-pyridinyl)dithio]-2-butene-HCl (prepn. given) was treated with di(2-pyridyl) thionocarbonate and the product formed was condensed with Me3CCO2CNHNH2. Deprotection of the resulting product by CF3CO2H gave N-[4-(2-pyridinyl)dithio]-2-butenyl]hydrazinecarbothioamide. This was condensed with adriamycin-HCl to give adriamycin 13-N-4-[(2-pyridinyl)dithio]-2-butenylhydrazinecarbothioamide thiosemicarbazene.cntdot.HCl (II). The **immunoconjugate** of II with thiolated monoclonal antibody 5E9 had IC50 of 3.0 .times. 10l-7M against Burkitt's lymphoma cells.

IT **133701-16-3P 140691-64-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for anticancer **immunoconjugates**)

RN 133701-16-3 HCAPLUS
CN Hydrazinecarboxamide, N-[2-(2-pyridinyldithio)ethyl]- (9CI) (CA INDEX NAME)



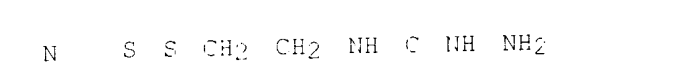
RN 140691-64-1 HCAPLUS
CN Hydrazinecarbothioamide, N-[4-(2-pyridinyldithio)-2-butenyl]- (9CI) (CA INDEX NAME)

L9 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:253907 HCAPLUS
DOCUMENT NUMBER: 114:253907
TITLE: New hydrazone derivatives of Adriamycin and their **immunoconjugates** - a correlation between acid stability and cytotoxicity
AUTHOR(S): Kaneko, Takushi; Willner, David; Monkovic, Ivo; Knipe, Jay O.; Braslawsky, Gary R.; Greenfield, Robert S.; Vyas, Dolatrai M.
CORPORATE SOURCE: Bristol-Myers Squibb Co., Wallingford, CT, 06492-7660, USA
SOURCE: Bioconjugate Chemistry (1991), 2(3), 133-41
CODEN: BCCHES; ISSN: 1043-1802
DOCUMENT TYPE: Journal
LANGUAGE: English

AB New N-substituted hydrazine linkers were synthesized and their hydrazone derivs. of adriamycin were prepd. The adriamycin derivs. were **conjugated** with a monoclonal antibody, 5E9. The release rate of adriamycin from the hydrazones and from some of the **conjugates** was studied, and their relationship to the cytotoxicity against 5E9-pos. Daudi cells was investigated.

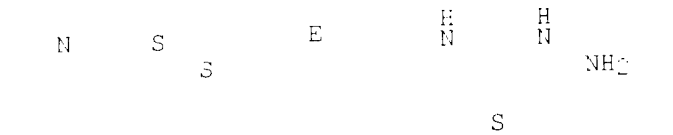
IT **133701-16-3P 133701-22-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with adriamycin, hydrazone from)

RN 133701-16-3 HCAPLUS
CN Hydrazinecarboxamide, N-[2-(2-pyridinyldithio)ethyl]- (9CI) (CA INDEX NAME)

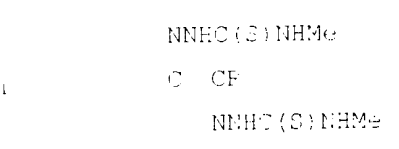


RN 133701-22-1 HCAPLUS
CN Hydrazinecarbothioamide, N-[4-(2-pyridinyldithio)-2-butenyl]-, (E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L9 ANSWER 20 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:20163 HCAPLUS
DOCUMENT NUMBER: 114:20163
TITLE: Radiolabeling of protein with radioisotopes of copper using p-carboxyalkylphenylglyoxal bis-(4N-methylthiosemicarbazone) (TSC) **bifunctional** chelates
AUTHOR(S): McPherson, D. W.; Umbricht, G.; Knapp, F. F., Jr.
CORPORATE SOURCE: Health Saf. Res. Div., Oak Ridge Natl., Oak Ridge, TN, 37831-6012, USA
SOURCE: Journal of Labelled Compounds and Radiopharmaceuticals (1990), 28(8), 877-99
CODEN: JLCRD4; ISSN: 0362-4803
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:20163
GI

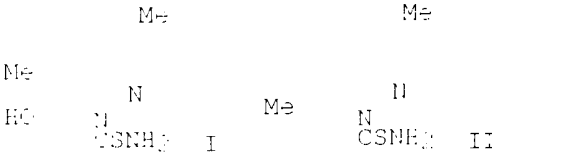


AB A series of p-carboxyalkylphenylglyoxal and p-carboxyalkyl-1,2-diketobis(N4-methylthiosemicarbazone) **bifunctional** ligands I (R = H or Me, n = 1-9) were prepd. and evaluated for use in binding radioisotopes of Cu to antibodies. An improved synthesis of the requisite .alpha.-keto aldehyde and 1,2-diketone substrates used for derivatization to the bis-TSC **bifunctional** chelates was developed. This approach utilizes a modified Kornblum method and provides a simple alternative to the usual method for fabrication of the 1,2-bis ligands, which avoids the use of highly toxic SeO_2 for oxidn. of substituted acetophenones to 1,2 dicarbonyl compds. The overall yields of the bis-TSC chelates using this procedure were 8-60%. The effects of the alkyl chain length and substitution on the C-2 position on **bifunctional** chelates for attaching radioisotopes of copper to proteins were studied. Following complexing ^{64}Cu or ^{67}Cu to the bis chelate, the acid moiety of the chelate was activated as the tetrafluorophenyl ester. The copper-labeled activated chelate was attached to bovine serum albumin under mild conditions in 3% to 40% yield. The shorter chain analog of the chelates from the 1,2-diketones give the highest radiolabeling yields.

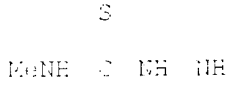
IT **6610-29-3**
RL: ECT (Reactant); FACT (Reactant or reagent)
(reaction of, with carboxyalkylphenylglyoxal derivs.)
RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)

L9 ANSWER 21 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1988:15963 HCAPLUS

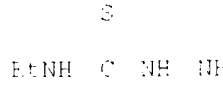
DOCUMENT NUMBER: 108:150362
TITLE: Reactions of 1,4-**bifunctional** derivatives of hydrazine with 1,3-diketones
AUTHOR(S): Selenin, V. N.; Sklod, O. V.; Tomchin, A. B.
CORPORATE SOURCE: Voen.-Med. Akad., Leningrad, USSR
SOURCE: Zhurnal Obshchei Khimii (1987), 57(3), 584-95
CODEN: ZOKHA4; ISSN: 0044-460X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 108:150362
GI



AB Hydrazine derivs., e.g., aminoguanidine nitrate, PhNHCONHNH2, amidrazonium iodides, R1ENCSNHNH2 (R1 = H, Me, Et) condense with RCOCH2COR (R = Me, Ph) to give, depending on reaction conditions, 5-hydroxy- and 5-hydrazino-2-pyrazolines, mono- and bis(hydrazones), and also the corresponding pyrazoles. Thus, treating MeCOCH2COMe with H2NCSNHNH2 gave pyrazoline I which dehydrated in refluxing solvent to give the corresponding pyrazole II. Addnl. obtained was R1NHN:CRCH2CR:NNHR1 [R = Me, R1 = CONHPh, C(:NH)(NH2).HNO3].
IT **6610-29-3**, 4-Methyl-3-thiosemicarbazide **13431-34-0**, 4-Ethyl-3-thiosemicarbazide
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation and cyclocondensation of, with diketones)
RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



RN 13431-34-0 HCAPLUS
CN Hydrazinecarbothioamide, N-ethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 22 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:196867 HCAPLUS
DOCUMENT NUMBER: 106:196867
TITLE: Polymers containing the [2H]-1,2,4-triazoline-3-thione ring
AUTHOR(S): Ratritsky, Alan R.; Cato, Stephen J.; Heilmann, Steven M.; Rasmussen, Jerald K.; Krepski, Larry R.

CORPORATE SOURCE: Chem. Dep., Univ. Florida, Gainesville, FL, 32611, USA
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1987), 25(1), 311-26
CODEN: JPACEC; ISSN: 0887-624X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB High-mol.-wt. polymers contg. [2H]-1,2,4-triazoline-3-thione rings are prepd. by the condensations of diisothiocyanates with bis(acid hydrazides) to give intermediate polymeric acylthiosemicarbazides that are ring-closed by refluxing in 1M aq. sodium carbonate. Thermal cyclization of the polymeric acylthiosemicarbazides leads to **crosslinked** insol. products. The acylation of bis(thiosemicarbazides) with bis(acid chlorides) produces polymers of a similar structure but lower mol. wt.

IT **6610-31-7P**, 4-Butylthiosemicarbazide **13431-41-9P**, 4-Benzylthiosemicarbazide
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with Et imido ester hydrochlorides)

RN 6610-31-7 HCAPLUS
CN Hydrazinecarbothioamide, N-butyl- (9CI) (CA INDEX NAME)

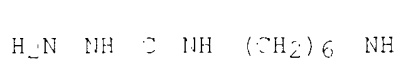
RN 13431-41-9 HCAPLUS
CN Hydrazinecarbothioamide, N-(phenylmethyl)- (9CI) (CA INDEX NAME)

IT **108144-98-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 108144-98-5 HCAPLUS
CN 1,4-Benzenedicarbonyl dichloride, polymer with N,N'-1,6-hexanediylbis[hydrazinecarbothioamide] (9CI) (CA INDEX NAME)

CM 1

CRN 56473-15-5
CMF C8 H20 N6 S2

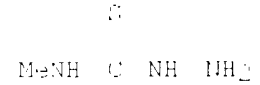


CM 2

CRN 100-20-9
CMF C8 H4 Cl2 O2

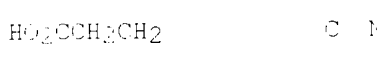
IT **56473-15-5**, 1,6-Hexanebis(thiosemicarbazide)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et benzimidoate hydrochloride)
RN 56473-15-5 HCAPLUS
CN Hydrazinecarbothioamide, N,N'-1,6-hexanediylbis- (9CI) (CA INDEX NAME)

L9 ANSWER 23 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:520711 HCAPLUS
DOCUMENT NUMBER: 105:120711
TITLE: Search for technetium-99m labeled DTS **bifunctional** radiopharmaceutical: role of functional groups in myocardial accumulation
AUTHOR(S): Hosotani, Takeo; Yokoyama, Akira; Arano, Yasushi; Horiuchi, Kazuko; Saji, Hideo; Torizuka, Kanji
CORPORATE SOURCE: Fac. Pharm. Sci., Kyoto Univ., Kyoto, 606, Japan
SOURCE: Applied Radiation and Isotopes (1986), 37(6), 505-11
CODEN: APISEP; ISSN: 0883-2889
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 105:120711
AB Various mols. contg. a neutral 99mTc-dithiosemicarbazone (DTS) structure as the Tc chelating site, along with various functional groups (NH2, CO2H or iso-Bu group with diverse charge) were tested for their chem. or biol. functions. The study on the effect of those functional groups was carried out in vitro and in vivo. The validity of introducing an NH2 group along with the Tc chelating site DTS for myocardial accumulation is discussed.
IT **6610-29-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenylglyoxals)
RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



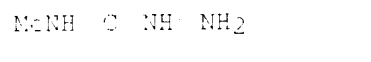
L9 ANSWER 24 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:438348 HCAPLUS

DOCUMENT NUMBER: 105:36342
TITLE: Synthesis and evaluation of a new **bifunctional** chelating agent for technetium-99m labeling proteins: p-carboxyethylphenylglyoxal-di(N-methylthiosemicarbazone)
AUTHOR(S): Arano, Yasushi; Yokoyama, Akira; Magata, Yasuhiro; Saji, Hideo; Horiuchi, Kazuko; Torizuka, Kanji
CORPORATE SOURCE: Fac. Pharm. Sci., Kyoto Univ., Kyoto, 606, Japan
SOURCE: International Journal of Nuclear Medicine and Biology (1986), 13(6), 425-30
CODEN: IJNMCI; ISSN: 0047-0740
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



AB A new **bifunctional** chelating agent, p-carboxyethylphenylglyoxal-di(N-methylthiosemicarbazone) (I), contg. a di(N-methylthiosemicarbazone) as the Tc coordinating site and an aralkyl carboxylate site for the protein **conjugation** was synthesized. Coupling to human serum albumin (HSA), selected as a model protein, was carried out by the phosphorylazide method using diphenylphosphoryl azide (DPPA). The **conjugation** level of I to HSA played a crit. role in its biol. evaluation. A 99mTc-I-HSA with high in vivo stability was obtained when I was coupled to HSA at 1:1 molar ratio. This compd. showed similar in vivo stability to 131I-labeled HSA in mice and rabbits.

IT **6610-29-3**
RL: PRP (Properties)
(**conjugation** of, with acetylphenylpropionic acid)
RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



L9 ANSWER 25 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:184835 HCAPLUS
DOCUMENT NUMBER: 102:184835
TITLE: p-Glyoxalphenylalkylcarboxylic acid bis(thiosemicarbazone) derivatives
PATENT ASSIGNEE(S): Nihon Medi-Physics Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 59193870	A2	19841102	JP 1983-68850	19830419
JP 04016465	B4	19920324		
AU 8319934	A1	19841025	AU 1983-19934	19831006
AU 561508	B2	19870514		
US 4550111	A	19851217	US 1983-538884	19831007
CA 1206476	A1	19860701	CA 1983-438615	19831007

PRIORITY APPLN. INFO.: JP 1983-68850 19830419
JP 1983-68851 19830419

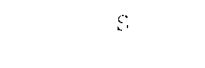
OTHER SOURCE(S): CASREACT 102:184833

AB **Bifunctional** ligand title derivs. 4-HO2C(CH2)nC6H4C(:NNHCSNHMe)CH:NNHCSNHMe I (n = 1-4) were prepd. by reaction of 4-HO2C(CH2)nC6H4COCHO (II) with H2NNHCSNHMe (III). I are useful as radioactive diagnostic reagents labeled with radioactive metals. Thus, refluxing 1.76 g 4-HO2CCH2C6H4COMe with 1.22 g SeO2 in dioxane 7 h gave II (n = 1), which (in EtOH) was added to 2.1 g III in 15 mL N aq. HCl at 60.degree. to ppt. 1.1 g I (n = 1).

IT **6610-29-3**
RL: FOT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenylglyoxal derivs.)

RN 6610-29-3 HCAPLUS

CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)

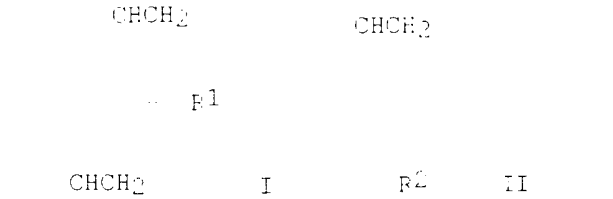


L9 ANSWER 26 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:25570 HCAPLUS
DOCUMENT NUMBER: 102:25570
TITLE: Basic polymers
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 59152905	A2	19840831	JP 1983-26892	19830222
JP 04069169	B4	19921105		

PRIORITY APPLN. INFO.: JP 1983-26892 19830222

GI

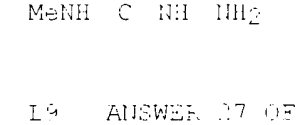


AB The 2-50:50-98 (molar) I-II copolymers substituted with 10-99 mol% (based on total benzene rings) nuclear -COX group (X = OH, Cl) were treated with (methyl)thiosemicarbazide, an alkali, and then a nitrite salt in HNO3 to obtain the **crosslinked** title polymers having 10-98 mol% (based on total benzene rings) III groups (on benzene rings), useful for anion exchangers (R's = H, C1-4 hydrocarbyl). Thus, 17:83 m-divinylbenzene-styrene copolymer was subjected to a Friedel-Crafts reaction with oxalyl chloride in CS2 to obtain a chlorocarbonyl deriv. (I, 58 mol% COCl), which (11.5-4 g) was mixed with 150 mL EtOH and 21.0 g methylthiosemicarbazide, stirred under reflux for 2 h, filtered, washed with acetone-H2O, heated with 60 g NaOH in 300 mL water at 100.degree. for 1.5 h, filtered, washed with water, suspended in 100 mL water, and treated with 8.2 g NaNO2 and 50 mL concd. HNO3 at 45.degree. for 2 h to give 13.345 g polymer (52 mol % 4-methyltriazole group) having exchange capacity (HCl form) 1.71 mequiv/g.

IT **6610-29-3**
RL: USES (Uses)
(in triazole group-contg. styrene deriv. polymer anion exchanger manuf.)

RN 6610-29-3 HCAPLUS

CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



MeNH C NH NH2

L9 ANSWER 17 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1981:468041 HCAPLUS
DOCUMENT NUMBER: 95:68081
TITLE: 1-Oxopropanaldehydebis(thiosemicarbazone) derivatives
INVENTOR(S): Yakoyama, Akira; Arano, Yasushi
PATENT ASSIGNEE(S): Nihon Medi-Physics Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 24464	A1	19810311	EP 1980-100199	19800110
EP 24464	B1	19820512		
R: BE, DE, FR, GB, NL, SE				
JP 56034664	A2	19810406	JP 1979-110821	19790829
JP 56034665	A2	19810406	JP 1979-110822	19790829
AU 8054721	A1	19810305	AU 1980-54721	19800110
AU 527413	B2	19830505		
US 4278762	A	19810707	US 1980-113341	19800118
CA 1175418	A1	19841002	CA 1980-343997	19800118
US 4338248	A	19820706	US 1980-177947	19800814

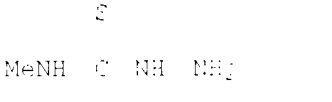
PRIORITY APPLN. INFO.: JP 1979-110821 19790829
JP 1979-110822 19790829
US 1980-113341 19800118

AB A radiolabeled diagnostic agent prepd. from a protein and a radioactive element and a **bifunctional** chelating agent is quite stable. The

chelating agent 3-carboxy-2-oxopropionaldehyde bis(N-methylthiosemicarbazone) (I) [78277-80-2], prepd. from Et diethoxyacetate [10495-09-7] and N-methylthiosemicarbazide [**6610-29-3**] and hydrolysis of the resulting 3-ethoxycarbonyl-2-oxopropionaldehyde bis(N-methylthiosemicarbazone) [78277-83-5], was converted to a mixed anhydride by treatment with iso-Bu chloroformate. Human serum albumin was mixed with the anhydride and subjected to dialysis followed by lyophilization. The albumin-I complex was treated with 99mTc (10.5mCi) at pH 5.6 in the form of a pertechnetate and reduced with SnCl2 soln. to yield a 99mTc-albumin-I complex useful as a radioactive diagnostic agent. The complex had a labeling efficiency of .apprx.100%, showed higher blood levels for longer times than conventional 99mTc-albumin complexes, and was quite stable.

IT **6610-29-3**
RL: RCT (Reactant); FACT (Reactant or reagent)
(reaction of, with Et diethoxyacetoacetate)

RN 6610-29-3 HCAPLUS
CN Hydrazinecarbothioamide, N-methyl- (9CI) (CA INDEX NAME)



MeNH C NH NH2

L9 ANSWER 28 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:613698 HCAPLUS
DOCUMENT NUMBER: 91:213698
TITLE: Aqueous dispersions of copolymers with carbonyl groups and containing hydrazine derivatives
INVENTOR(S): Ley, Gregor; Penzel, Erich; Rebafka, Walter; Bott, Kaspar
PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 3516	A1	19790822	EP 1979-100168	19790119
EP 3516	B1	19810401		
R: BE, CH, DE, FR, GB, IT, NL, SE				
DE 2803258	A	19790816	DE 1979-2803258	19790126
CA 1131786	A1	19820914	CA 1979-320224	19790124
DK 7900317	A	19790727	DK 1979-317	19790125
DK 151666	B	19880111		
DK 151666	C	19880613		
NO 790255	A	19790727	NO 1979-255	19790125
NO 155694	B	19870803		
NO 155694	C	19870913		
ES 477135	A1	19791101	ES 1979-477135	19790125
AT 7900557	A	19801015	AT 1979-557	19790125
AT 362516	B	19810625		
JP 54110048	A2	19790829	JP 1979-7291	19790126
JP 61006361	B4	19860301		

PRIORITY APPLN. INFO.: DE 1978-2803258 19780126

AB Aq. coating dispersions of reaction products of polycarboxylic acid hydrazides, bis(semicarbazides), or CO(NHNH2)2 with aldehyde or ketone carbonyl group-contg. vinyl polymers are stabilized against hydrolysis during storage by addn. of 0.0002-0.02 mol Cu, Fe, Mn, V, Sn, Cr, and(or) Ni per mol hydrazine deriv.; the metal salts are also **crosslinking** catalysts. Thus, 200 parts 17.5% aq. 25:50:25 succinic dihydrazide-glutaric dihydrazide-adipic dihydrazide dispersion and 0.06 part CuSO4 were added to a copolymer dispersion, prepd. from Me acrylate 375, Bu acrylate 90, acrylic acid 10, and acrolein 25 parts, to give a storage-stable dispersion. A room temp.-dried coating film swelled in DMF picking up 110-210% of its wt. in 1 day, but did not dissolve.

IT **51440-70-1D**, reaction products with carbonyl group-contg. polymers
PL: TEM (Technical or engineered material use); USES (Uses, (coatings, stabilization of, with transition metal salts)

RN 51440-70-1 HCAPLUS

CN Hydrazinecarboxamide, N,N'-1,6-hexanediylbis- (9CI) (CA INDEX NAME)

L9 ANSWER 29 OF 38 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1978:598892 HCAPLUS

DOCUMENT NUMBER: 89:198892

TITLE: Self-**crosslinkable** polyurethanes

INVENTOR(S): Winkelmann, Hans Dieter; Wolf, Karl Heinz; Oertel, Harald; Weimann, Norbert

PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 53 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

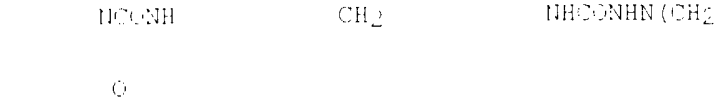
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2707659	A1	19780824	DE 1977-2707659	19770223
US 4153775	A	19790508	US 1978-879504	19780221
JP 53105599	A2	19780913	JP 1978-18646	19780222
GB 1597869	A	19810916	GB 1978-7034	19780222
NL 7802036	A	19780825	NL 1978-2036	19780223

PRIORITY APPLN. INFO.: DE 1977-2707659 19770223

GI



AB Urethane I [68125-44-9] and similar diols contg. caprolactam (II) [105-60-2]-blocked isocyanate groups were prepd. for use in the manuf. of self-**crosslinking** polyurethane elastomers. Thus, an adduct of 2

mol II and 1 mol bis(4-isocyanatophenyl)methane (III) [101-68-8] was treated with H.NN(CH2CHMeOH)2 [62723-38-0] to prep. I. Adipic acid-1,6-hexanediol-neopentyl glycol copolymer (mol. wt. 1875) 500, MeN(CH2CHMeOH)2 10.58, I 37.2, and III 163.3 parts were used to prep. a prepolymer which was treated with ethylenediamine and diisocyanatohexane to prep. a **crosslinkable** copolymer [68125-45-1]. A film prepd. from the copolymer and heated at 130.degree. for 30 min was insol. in DMF at 50.degree..

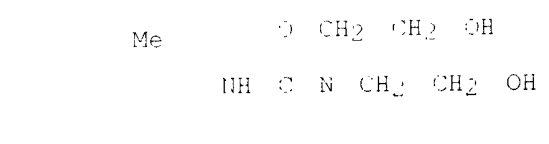
IT **68125-51-9**
PL: USES (Uses)
(rubber, **crosslinked**)

RN 68125-51-9 HCAPLUS

CN .beta.-Alanine, N-(hydrazinocarbonyl)-, hydrazide, polymer with N-[3-[[[bis(2-hydroxyethyl)amino]carbonyl]amino]-4-methylphenyl]hexahydro-2-oxo-1H-azepine-1-carboxamide, 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,1'-methylenebis[4-isocyanatobenzene] and 1,1'-(methylimino)bis[2-propanol] (9CI) (CA INDEX NAME)

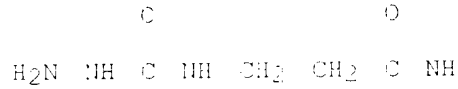
CM 1

CRN 68125-43-4
CMF C19 H28 N4 O5



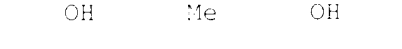
CM 2

CRN 26305-54-4
CMF C4 H11 N5 O2



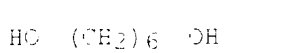
CM 3

CRN 4402-30-6
CMF C7 H17 N O2



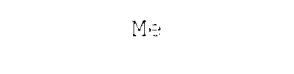
CM 4

CRN 629-11-8
CMF C6 H14 O2



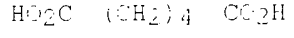
CM 5

CRN 126-30-7
CMF C5 H12 O2



CM 6

CRN 124-04-9
CMF C6 H10 O4



CM 7

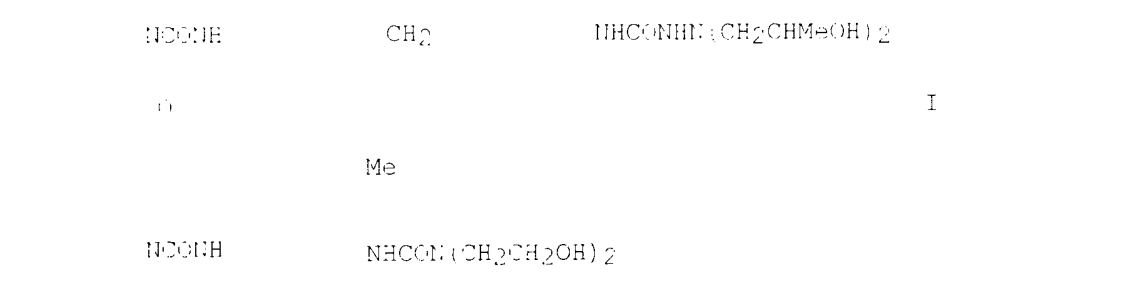
CRN 101-68-8
CMF C15 H10 N2 O2

L9 ANSWER 30 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1978:598891 HCAPLUS
DOCUMENT NUMBER: 89:198891
TITLE: Isocyanate adduct diols
INVENTOR(S): Winkelmann, Hans Dieter; Wolf, Karl Heinz; Oertel, Harald; Weimann, Norbert
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 50 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2707660	A1	19780824	DE 1977-2707660	19770223
DE 2707660	C2	19851212		
US 4211699	A	19800708	US 1978-879740	19780221
JP 53105428	A2	19780913	JP 1978-18647	19780222
JP 60053017	B4	19851122		

PRIORITY APPLN. INFO.: DE 1977-2707660 19770223
GI



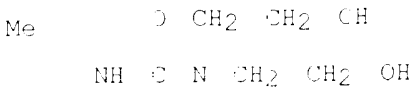
AB I [68125-44-0], II [68125-48-4], and 3 similar diols were prepd. and used for the manuf. of self-**crosslinking** polyurethane elastomers. Thus, an adduct of 2 mol caprolactam [105-60-2] and 1 mol bis(4-isocyanatophenyl)methane (III) [101-68-8] was treated with HZNN(CH2CHMeOH)2 [68723-38-0] to prep. I. I 37.2, adipic acid-neopentyl glycol-1,6-hexanediol copolymer (mol. wt. 1875) 500, MeN(CH2CHMeOH)2 10.68, and III 163.3 parts were used to prep. a prepolymer which was treated with ethylenediamine and OCN(CH2)6NCO to prep. a polyurethane [68125-45-1]. A film prepd. from the polyurethane and heated at 130.degree. for 30 min was insol. in DMF at 80.degree..

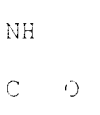
IT **68125-51-9**
PL: USES (Uses)
(rubber, **crosslinked**)

RN 68125-51-9 HCAPLUS
CN .beta.-Alanine, N-(hydrazinocarbonyl)-, hydrazide, polymer with N-[3-[[[bis(2-hydroxyethyl)amino]carbonyl]amino]-4-methylphenyl]hexahydro-2-oxo-1H-azepine-1-carboxamide, 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,1'-methylenebis[4-isocyanatobenzene] and 1,1'-(methylimino)bis[2-propanol] (9CI) (CA INDEX NAME)

CM 1

CRN 68125-48-4
CMF C19 H28 N4 O5



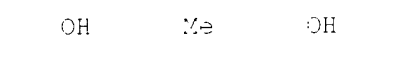


CM 2

CRN 20305-54-4
CMF C4 H11 N5 O2

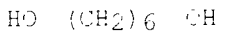
CM 3

CRN 4402-30-6
CMF C7 H17 N O2



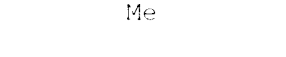
CM 4

CRN 629-11-8
CMF C6 H14 O2



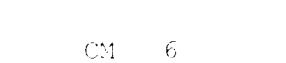
CM 5

CRN 126-30-7
CMF C5 H12 O2



CM 6

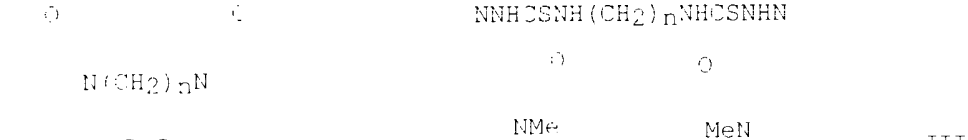
CRN 124-04-9
CMF C6 H10 O4



CM 7

CRN 101-66-8
CMF C15 H10 N2 O2

L9 ANSWER 31 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:59304 HCAPLUS
DOCUMENT NUMBER: 85:192481
TITLE: Bis(thiosemicarbazido)alkanes and their main optical characteristics
AUTHOR(S): Zimenkovskii, B. S.; Turkevich, N. M.
CORPORATE SOURCE: Lvov Med. Inst., Lvov, USSR
SOURCE: Farmatsevtichnii Zhurnal (Kiev) (1976), (4), 22-6
CODEN: FRZKAP; ISSN: 0367-3057
DOCUMENT TYPE: Journal
LANGUAGE: Ukrainian
GI

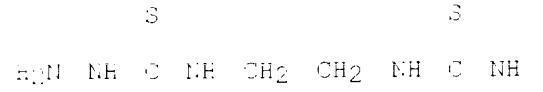


AB Hydrazinolysis of .alpha.,.omega.-bis(thiazino)alkane derivs. I (n = 2,6) afforded H2NNHCSNH(CH2)nNHCSNHNH2 (II), which reacted with 1-methylisatin to give bisthiosemicarbazones III. II had a single uv absorption max. at

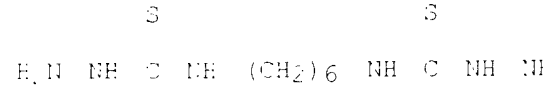
238-42 nm, corresponding to p-.pi. conjugation; III had uv max. at 238-46, 273-4, and 349-54 nm, corresponding to p-.pi., p-.pi.*, and the hydrazone chromophore, resp.

IT **1728-65-0P 56473-15-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and uv of, and reaction with methylisatin)

RN 1728-65-0 HCAPLUS
CN Hydrazinecarbothioamide, N,N'-1,2-ethanediylbis- (9CI) (CA INDEX NAME)



RN 56473-15-5 HCAPLUS
CN Hydrazinecarbothioamide, N,N'-1,6-hexanediylbis- (9CI) (CA INDEX NAME)



L9 ANSWER 32 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1975:140387 HCAPLUS
DOCUMENT NUMBER: 82:140387
TITLE: Steroid haptens
INVENTOR(S): Torelli, Vesperto; Pierdet, Andre
PATENT ASSIGNEE(S): Roussel-UCLAF
SOURCE: Ger. Offen., 45 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2429040	A1	19750109	DE 1974-2429040	19740618
DE 2429040	C2	19851031		
FR 2235949	A1	19750131	FR 1973-22114	19730618
SE 7407106	A	19741219	SE 1974-7108	19740529
SE 402461	C	19781012		
BE 816187	A1	19741217	BE 1974-145533	19740617
NL 7407841	A	19741220	NL 1974-8041	19740617
DK 7403022	A	19750210	DK 1974-3122	19740617
US 3917629	A	19751104	US 1974-479889	19740617
CA 1033941	A	19760704	CA 1974-8441	19740617
ES 427818	A1	19760916	ES 1974-427818	19740617
BE 7404[illegible]	A0	19750131	BE 1974-4979	19740618
JP 50006451	A2	19750205	JP 1974-69809	19740618
JP 58[illegible]	B4	19830609		
AU 7470[illegible]	A1	19751218	AU 1974-70148	19740618
GE 14[illegible]	A	19770[illegible]	GE 1974-[illegible]	19740618
GB 14[illegible]	A	19770623	GB 1974-3648	19740618
AT 7405[illegible]	A	19770815	AT 1974-5048	19740618
ES 448013	A1	19770701	ES 1976-448013	19760617
ES 448012	A1	19770701	ES 1976-448012	19760617

AT 351630	B	19790410	AT 1976-3863	19761210
AT [illegible]	A	19790115		
JP [illegible]	A2	19830530	CP 1982-184870	19821109
JP [illegible]	B4	19860611		
CP [illegible]	A.	19830530	CP 1982-184871	19821109
CP [illegible]	B4	19830530		
CP [illegible]	A.	19850107	CP 1984-230124	19840413
CP [illegible]	B4	19871104		

PRIORITY APPLN. INFO.: FR 1972-21114 19720613
AT 1974-5041 19740620

GI For diagram(s), see printed CA Issue.

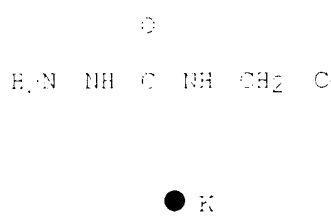
AB Estratrienols I [R = H, R1 = (CH2)3CO2H, (CH2)10CO2H; RR1 = NOCH2CO2H, NHNHCOCH2CO2H, NOCH2CO2H; R3 = H, (CH2)3CO2H; R4 = H, HO; R4 = H; R5 = HO, R4R5 = O] (10 compds.) were prepd. I [R = R1 = R3 = R4 = H; R2 = (CH2)3CO2H, R5 = HO] (II) and I [R = R1 = R3 = H, R1 = (CH2)3CO2H, R4R5 = O] formed **conjugates** with bovine serum albumins. Thus, secoestrenol III was successively epoxidized, sapond., treated with CH2:CHCH2MgBr, hydrolyzed, cyclized, aromatized, sapond., benzoylated, ozonized, treated with (EtO)2POCH2CO2Me, and hydrogenated to give I [R = R1 = R3 = R4 = H, R2 = (CH2)3CO2H, R5 = HO]. 4-Dehydro-19-nortestosterone acetate was successively treated with the tetrahydropyranyl ether of CIMgCH2CH2OH, sapond., oxidized, and dehydrogenated to give I [R = H, R1 = (CH2)3CO2H, R2 = R3 = H, R4R5 = O].

IT **3242-64-6**

RL: BOT (Reactant); FACT (Reactant or reagent)
(reaction of, with hydroxyestratrienone)

RN 3242-64-6 HCAPLUS

CN Glycine, N-(hydrazinocarbonyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

L9 ANSWER 33 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:404780 HCAPLUS
DOCUMENT NUMBER: 81:4780
TITLE: Polyurethane coatings
INVENTOR(S): Zorn, Bruno; Noll, Klaus; Oertel, Harald; Traeubel, Hanno
PATENT ASSIGNEE(S): Bayer A.-G.
SOURCE: Ger. Offen., 35 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2211756	A1	19731113	DE 1972-2211756	19720504
DE [illegible]	B2	19781026		
DE 2211756	C3	19800626		
CA 1003712	A1	19770118	CA 1973-169961	19730425

JP 49032150	A2	19740327	GB 1973-47619	19730501
JP 58002379	B4	19830115		
IT 48[illegible]64	A	19750410	IT 1973-49740	19730502
BE 800431	A1	19731102	BE 1973-130686	19730503
NL 7306166	A	19731106	NL 1973-6160	19730503
NL 177[illegible]8	B	19850401		
NL 177[illegible]8	C	19850902		
ES 414[illegible]6	A1	19760201	ES 1973-414335	19730503
FR 2183773	A1	19731214	FR 1973-16162	19730504
GB 1[illegible]033	A	19750129	GB 1973-21174	19730504

PRIORITY APPLN. INFO.: DE 1972-2220756 19720504

AB Solvent-stable polyurethanes, useful as light- and abrasion-resistant coatings for textiles, leather, and leather substitutes, are prepd. by mixing solns. of aliph. or cycloaliph. diisocyanate-contg. urethane prepolymers (essentially free of NCO or NH2 groups) in hydrocarbon-aliph. secondary alc. solvents with aliph. polyisocyanates, NCO functionality >2. Thus, heating adipic acid-1,4-butanediol copolymer (OH no. 31, mol. wt. 2100) 1000, OH-terminated dimethylsiloxane (OH no. 198, mol. wt. 600) 84, 1-isocyanato-3-(isocyanatomethyl)-3,5,5-trimethylcyclohexane 710, and xylene 4000 parts 2 hr at 80-100.deg. (NCO content 2.1%) and addn. of sufficient 374:4000 1-amino-3-(aminomethyl)-3,5,5-trimethylcyclohexane-MeCOOH soln. to give 25.deg. viscosity .sim. 150 P gives a soln. of clear, solid, EtOH-sol. adipic acid-1-amino-3-(aminomethyl)-3,5,5-trimethylcyclohexane-1,4-butanediol-1-isocyanato-3-(isocyanatomethyl)-3,5,5-trimethylcyclohexane copolymer [51294-82-4]. A 12 .mu. coating on textiles prepd. from this soln. with addn. of 30% (based on solids) com. hexamethylene diisocyanate [822-06-0]-based biuret-triisocyanate (I) cured 1 week at room temp. has very good alc. rub-fastness, compared with unsatisfactory-moderate in the presence of 0-20% I.

IT **52004-60-1**

RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, for leather and textiles)

RN 52004-60-1 HCAPLUS

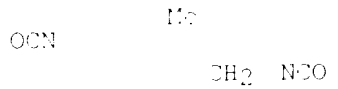
CN .beta.-Alanine, N-(hydrazinocarbonyl)-, hydrazide, polymer with hexanedioic acid, 1,6-hexanediol and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

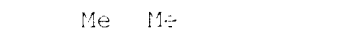
CM 1

CRN 26805-54-4
CMF C4 H11 N5 O2

CM 2

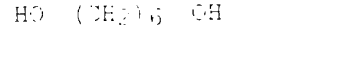
CRN 4035-71-9
CMF C12 H18 N2 O2





CM 3

CRN 619-11-8
CMF C6 H14 O2



CM 4

CRN 124-04-9
CMF C6 H10 O4

L9 ANSWER 34 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:27645 HCAPLUS
DOCUMENT NUMBER: 80:27645
TITLE: 4,4-Alkylenebissemicarbazides and their derivatives
INVENTOR(S): Sheppard, Chester S.; MacLeay, Ronald E.
PATENT ASSIGNEE(S): Pennwalt Corp.
SOURCE: U.S., 10 pp. Division of U.S. 3,585,200 (CA 75;77759k).
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3755238	A	19730828	US 1970-59807	19700622
US 3585200	A	19710615	US 1966-556263	19660609

PRIORITY APPLN. INFO.: US 1966-556263 19660609

AB Substituted oxadiazolinones were treated with diamines to give alkylene bis(semicarbazides) which were used as monomers, blowing agents, and polymn. initiators. A mixt. contg. 50 g 2-phenyl-.DELTA.2-1,3,4-oxadiazolin-5-one [1139-02-6], 9.0 g ethylenediamine [107-15-3], and 250 ml H2O was refluxed 21.5 hr to give 76.5% 4,4-ethylenebis(1-benzoylsemicarbazide) [32304-03-3], m. 268-64.deg.. 4,4',4,4'-Diethylenebis-(1-benzoylsemicarbazide) [32251-24-4] was prepd. by refluxing a mixt. of 2-phenyl-.DELTA.2-1,3,4-oxadiazolin-5-one, piperazine [110-85-0] and H2O. 4,4'-Etnylenebis(semicarbazide hydrochloride) [**33618-20-1**] was polymd. with fumaroyl chloride [627-63-4] in 64%

yield to give a copolymer, m. .leq.300. Styrene [100-42-5] was polymd. in the presence of N,N'-ethylenebis(2-cyano-2-propylazoformamide) (I) [32251-39-9] and the rate of polymn. at 5% and 10% conversion was 6.47 .tim. 10-3 and 6.27 .tim. 10-3 moles/l.-min resp., compared to 2.81 .tim. 10-3 moles/l.-min at both conversions in the absence of I.

IT **32239-91-1P 32251-26-6P 33618-20-1P**
33636-52-1P 34777-39-4P
RL: PREP (Preparation)
(prepn. of)

RN 32239-91-1 HCAPLUS
CN 2-Butenedioyl dichloride, (E)-, polymer with 2,2'-(1,2-ethanediyl)bis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

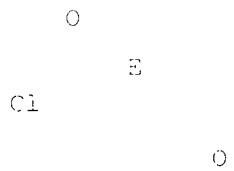
CM 1

CRN 32251-26-6
CMF C4 H12 N6 O2

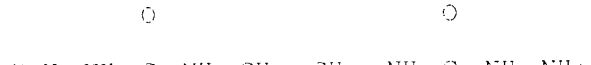
CM 2

CRN 627-63-4
CMF C4 H2 Cl2 O2

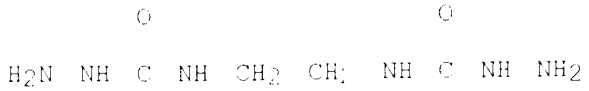
Double bond geometry as shown.

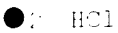


RN 32251-26-6 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis- (9CI) (CA INDEX NAME)



RN 33618-20-1 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, dihydrochloride (9CI) (CA INDEX NAME)





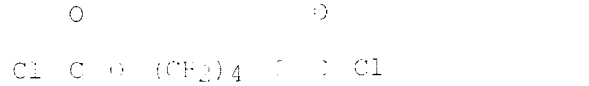
RN 23636-53-1 HCAPLUS
CN Carbonochloridic acid, 1,4-butanediyl ester, polymer with N,N'-1,2-ethanediylbis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

CM 1

CRN 33251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 2157-16-6
CMF C6 H8 Cl2 O4



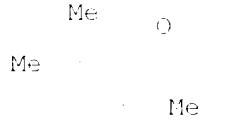
RN 34777-39-4 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, polymer with 2,2,4,4-tetramethyl-1,3-cyclobutanedione (9CI) (CA INDEX NAME)

CM 1

CRN 33251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 933-52-3
CMF C8 H12 O2



L9 ANSWER 25 OF 39 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1974:4063 HCAPLUS
DOCUMENT NUMBER: 80:4063
TITLE: 4,4'-Alkylenebis(semicarbazide) and derivatives
INVENTOR(S): Sheppard, Chester S.; Macleay, Ronald E.
PATENT ASSIGNEE(S): Pennwalt Corp.
SOURCE: U.S., 8 pp. Division of U.S. 3,565,200 (CA 75;77759k).
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3755443	A	19730828	US 1970-50602P	19700622
US 3565960	A	19710223	US 1966-556263	19660609

PRIORITY APPLN. INFO.: US 1966-556263 19660609

AB 4,4-Ethylenebis(semicarbazide) (I) [**32251-26-6**], 4,4'-ethylenebis(1-benzoylsemicarbazide) (II) [42304-03-3], 4,4'-ethylenebis(semicarbazide) dihydrochloride (III) [**33618-20-1**], BzNHNHCONH(CH2)12NHCONHNHBz, and 6 derivs. of I, such as (BzN:NCONHCH2)2, (Me2C:NNHCONHCH2)2, and (NCCMe2NHNHCONHCH2)2, are prepd. Also prepd. are the IV with R = BzNHNH, H2NNH (dihydrochloride), BzN:N, iso-PrOCONHNH, iso-PrOCON:N, and H2NCON:N. These compds. are used as monomers, polymn. catalysts, and blowing agents. Thus, 3-phenyl-.DELTA..1,3,4-oxadiazolin-5-one [1199-02-6] 50, ethylenediamine [107-15-3] 9, and water 250 g were refluxed for 21.5 hr to prep. 76.5% II and a minor amt. of 4-(.beta.-aminoethyl)-1-benzoylsemicarbazide. Refluxing of II (8 g) in 100 ml 10% HCl for 3 3/4 hr gave 1 g III which was dissolved in 10 ml water and treated with 0.64 g 50% aq. NaOH to prep. I. A polymer of I and fumaroyl chloride (IV) [627-63-4] was prepd. by adding 1.53 g IV in 25 ml toluene to a soln. of III 2.49, 50% NaOH 1.6, NaCl 1, and Na2CO3 1.59 g in 25 ml water. This polymer was heated at 230-50.deg., 20 mm for 2 hr to prep. a polyoxadiazole m. >300.deg.. Refluxing of III (0.8 g) and Na acetate (0.39 g) in 13 ml water with tetramethyl-1,3-cyclobutanedione (V) [933-52-8] gave a I-V polymer which did not melt or discolor to 305.deg..

IT **32239-91-1P 33618-20-1P 33636-52-1P**
34777-39-4P
RL: PREP (Preparation)
(prepn. of)

RN 4053-41-1 HCAPLUS
CN 2-Butenedioyl dichloride, (E)-, polymer with 2,2'-(1,2-ethanediyl)bis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

CM 1

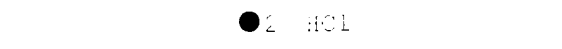
CRN 32251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 607-63-4
CMF C4 H2 Cl2 O2

Double bond geometry as shown.

RN 3?613-..6-1 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, dihydrochloride (9CI) (CA INDEX NAME)



RN 33636-9?-1 HCAPLUS
CN Carbonochloridic acid, 1,4-butanediyl ester, polymer with N,N'-1,2-ethanediylbis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

CM 1

CRN 32251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 2157-16-?
CMF C6 H8 Cl2 O4

RN 34777-39-4 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, polymer with 2,2,4,4-tetramethyl-1,3-cyclobutanedione (9CI) (CA INDEX NAME)

CM 1

CRN 32251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 933-52-6
CMF C8 H14 O2

L9 ANSWER 36 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1971:477759 HCAPLUS
DOCUMENT NUMBER: 75:77759
TITLE: Alkylenebis(benzoylsemicarbazides)
INVENTOR(S): Sheppard, Chester S.; MacLeay, Ronald E.
PATENT ASSIGNEE(S): Pennwalt Corp.
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3585203	A	19710615	US 1966-556263	19660609
US 3754445	A	19730828	US 1970-59808	19700622
US 3752848	A	19730814	US 1970-59807	19700622

PRIORITY APPLN. INFO.: US 1966-556263 19660609
GI For diagram(s), see printed CA Issue.
AB Alkylenebis(benzoylsemicarbazides), useful as intermediates in the prepn. of blowing agents and polymers, were prepd. by treating 2-substituted-.DELTA.2-1,3,4-oxadiazolin-5-ones with primary and secondary

diamines at 90-115.degree.. Thus, 5.6 g 2-phenyl-.DELTA.2-1,3,4-oxadiazolin-5-one and 3.0 g ethylenediamine was refluxed in 250 ml of water to give 4,4'-ethylenebis(1-benzoyl-semicarbazide) (I) m. 162-4.degree.. Similarly prepd. were 4,4',4,4'-diethylenebis(1-benzoylsemicarbazide) (II) and 4,4'-dodecamethylenebis(1-benzoylsemicarbazide). I was hydrolyzed with HCl and then treated with NaOH to yield 4,4'-ethylenebis-semicarbazide) which copolymd. interfacially with fumaroyl chloride to give poly(fumaroyliminoureylenoethylenemethylenimino) (III). On heating 2 hr at 130-50.degree./20 mm III yielded a polyoxadiazole. I.2HCl was treated with H2O, NaOAc and Me2CO to yield 4,4'-ethylenebis(1-isopropylidenesemicarbazide) which was treated with HCN to give ethylenebis[1-(2-cyano-2-propyl)-semicarbazide] (IV). IV was oxidized to N,N'-ethylenebis(2-cyano-2-propylazoformamide) which initiated the polymn. of styrene and was used as a blowing agent for vinyl foams.

IT **32239-91-1P 32251-26-6P 33618-20-1P**
33636-52-1P 34777-39-4P
PL: PREP (Preparation)
(prepn. of)

RN 32239-91-1 HCAPLUS
CN 2-Butenedioyl dichloride, (E)-, polymer with 2,2'-(1,2-ethanediyl)bis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

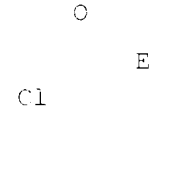
PM 1

CRN 32251-26-6
CMF C4 H12 N6 O2

CM 2

CRN 627-63-4
CMF C4 H2 Cl2 O2

Double bond geometry as shown.



RN 32251-26-6 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis- (9CI) (CA INDEX NAME)

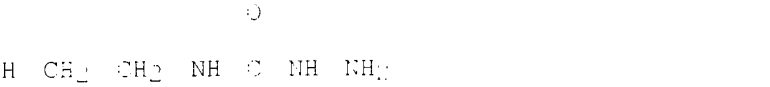
RN 33618-20-1 HCAPLUS

CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, dihydrochloride (9CI) (CA INDEX NAME)

RN 33636-50-1 HCAPLUS
CN Carbonochloridic acid, 1,4-butanediyl ester, polymer with N,N'-1,2-ethanediylbis[hydrazinecarboxamide] (9CI) (CA INDEX NAME)

CM 1

CRN 32251-36-6
CMF C4 H12 N6 O2



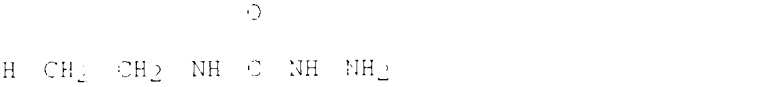
CM 2

CRN 2157-16-6
CMF C6 H8 Cl2 O4

RN 34777-39-4 HCAPLUS
CN Hydrazinecarboxamide, N,N'-1,2-ethanediylbis-, polymer with 2,2,4,4-tetramethyl-1,3-cyclobutanedione (9CI) (CA INDEX NAME)

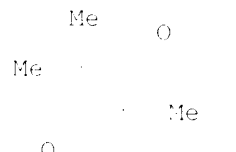
CM 1

CRN 32251-36-6
CMF C4 H12 N6 O2



CM 2

CRN 933-52-8
CMF C8 H12 O2



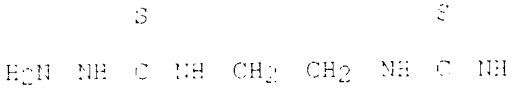
L9 ANSWER 37 OF 38 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1961:70686 HCAPLUS
DOCUMENT NUMBER: 55:70686
ORIGINAL REFERENCE NO.: 55:13433d-i,13434a-b
TITLE: Nitro olefins. II. Derivatives of .alpha.-nitroacetophenone
AUTHOR(S): Campbell, Richard D.; Schultz, Frederick J.
CORPORATE SOURCE: State Univ. of Iowa, Iowa City
SOURCE: Journal of Organic Chemistry (1960), 25, 1877-81
CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C. A. 54, 15591a. Reactions for the prepn. of derivs. of PhCOCH2NO2 (I) gave a series of 16 related compds. and the ultraviolet and infrared spectra were reported and discussed. I (8.05 g.) in 60 ml. dry C6H6 stirred with dropwise addn. of 2g. KOH in 40 ml. abs MeOH and the product washed twice with 1:1 MeOH-C6H6 yielded 76% vacuum-dried PhC(OK):CHNO2. Similarly were prepd. PhC(ONH4):CHNO2 and PhC(OZ):CHNO2 (Z = morpholinium). The prepn. of .alpha.-amino-.beta.-nitrostyrenes was accomplished by treatment of PhCCl:CHNO2 (II) with appropriate amines. PhC.tplbond.CH (10 g.) in 75 ml. cold dry Et2O treated with 15 g. liquid NOCl, the mixt. kept 10 days with gradually rising temp. and gas evolution, the pale orange liquid evapd., and the yellow oil distd. gave 16.7% II, m. 8-9.degree. (petr. ether), strongly lachrimatory. Et2O (75 ml.) in a heavy-wall tube cooled to -80.degree. (solid CO2-Me2CO) and bubbled through with adsorption of 35 g. NO2Cl, stirred with gradual addn. of 17 g. PhC.tplbond.CH and kept 2 days at -80.degree. and 7 days at 20.degree., the solvent removed in vacuo and the residue distd. gave a yellow oil, b2.0 103.5.degree., crystd. from petr. ether to yield 35.8% II. Freshly distd. morpholine (0.19 g.) added to 1 g. II and the Et2O-sol., H2O-insol. portion crystd. from ligroine (b. 60-70.degree.) yielded 47.5% .alpha.-morpholino-.beta.-nitrostyrene, m. 167-8.degree.. Under similar conditions with 2-hr. reflux of the mixt., PrNH2 and II yielded 91.7% PhC(NHPr):CHNO2, m. 129-4.degree., and PhCH2NH2 gave 86.8% PhC(NHCH2Ph):CHNO2, m. 91.degree. (CCl4). II and cyclohexylamine kept 16 hrs. yielded 65% PhC(NHC6H11):CHNO2, m. 113-14.degree. (Et2O). The structures of these amine reaction products were established by acid hydrolysis to I. Several attempts were made to prep. .alpha.-acyloxy-.beta.-nitrostyrenes by acylation of I. I (4.1 g.) and 3,5-(O2N)2C6H3COCl (from 6 g. 3,5-(O2N)2C6H3CO2H) refluxed 2 hrs. in 2 ml. dry C5H5N and the warm soln. filtered gave 77.4% PhC[3,5-(O2N)2C6H3CO2]:CHNO2 (III), m. 187-8.degree.. III (2.0 g.) and 25 ml. 10% NaOH warmed 3 hrs. on a steam bath and the cold soln. acidified at 0.degree. with 6M HCl, extd. with Et2O and a portion of the dried ext. chromatographed showed the presence of MeNO2. Similar acylation of I with p-O2NC6H4COCl yielded 61% PhC(4-O2NC6H4CO2):CHNO2, m. 168-7.degree. (Me2CO, CHCl3-petr. ether). Addnl. products were obtained in a homologous series by reaction with PhCH:CMeNO2 (IV) and PhCHBrCMeBrNO2. Previously were prepd. homologs PhCH:CBrNO2 and PhCHBrCHBrNO2. IV (1 g.) in 15 ml. freshly distd.

morpholine kept 16 hrs. on a steam bath and the cooled soln. dild. with Et2O, washed (H2O) and evapd., the residue taken up in hot ligroine (b. 66-70.degree.) and the decolorized soln. cooled yielded 39.2% 1-phenyl-1-morpholino-2-nitropropane, m. 142-4.degree. (petr. ether). I (0.1 mole) in 175 ml. dry CH2Cl2 refluxed 2 days with 0.1 mole PCl5 and the residue vacuum distd. at 90.degree./12 mm., extd. with ligroine and the product recrystd. yielded 23.3% PhCCl:C(NO2)Me, m. 90.degree.. Spectral patterns resulting from keto-enol equil., H chelation, dipole interaction, and **conjugation** effects were discussed.

IT **1728-65-0**, Semicarbazide, 4,4'-ethylenedis[3-thio-
56473-15-5, Semicarbazide, 4,4'-hexamethylenebis[3-thio-
(prepn. of)

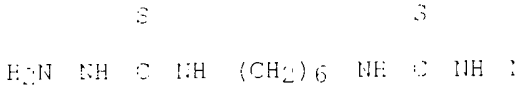
RN 1728-65-0 HCAPLUS

CN Hydrazinecarbothioamide, N,N'-1,2-ethanediylbis- (9CI) (CA INDEX NAME)



RN 56473-15-5 HCAPLUS

CN Hydrazinecarbothioamide, N,N'-1,6-hexanediylbis- (9CI) (CA INDEX NAME)



L9 ANSWER 38 OF 38 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1956:91004 HCAPLUS

DOCUMENT NUMBER: 50:91004

ORIGINAL REFERENCE NO.: 50:17123g-i,17124a

TITLE: The inhibition of growth of sarcoma 180 by combinations of vitamin B6 antagonists and acid hydrazides

AUTHOR(S): Brockman, R. Wallace; Thomson, J. Richard; Schabel, Frank M., Jr.; Skipper, Howard E.

CORPORATE SOURCE: Southern Research Inst., Birmingham, AL

SOURCE: Cancer Research (1956), 16, 788-95
CODEN: CNREA8; ISSN: 0008-5472

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

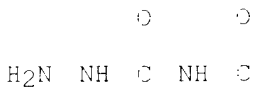
AB Deoxypyridoxine-HCl (I) and deoxypyridoxine phosphate (II) significantly restricted growth of sarcoma 180 in mice on a diet deficient in vitamin B6 (III), but not in mice on a complete diet. Many compds. of the acid hydrazide type also restricted growth of the sarcoma on a diet deficient in III, but none except 1,5-diaminobiuret at high dosage levels affected the tumor in mice on a complete diet. Combinations of II with acid hydrazides were more inhibitory to the tumor in mice on a complete diet than were combinations of I with acid hydrazides. The same combinations given to mice deficient in III resulted in severe restriction of tumor growth. Vitamins of the III group, i.e., pyridoxine-HCl, pyridoxamine-HCl, pyridoxal-HCl, and pyridoxal phosphate (IV), almost completely prevented the tumor-inhibiting effect of the combinations. Spectrophotometric studies demonstrated ability of the representative acid hydrazides to react with IV. The observed ability of acid hydrazides to enhance the inhibition of sarcoma 180 produced by III-deficiency and

III-antagonists is attributed to formation of an inactive **conjugate** between the acid hydrazides and IV.

IT **4375-11-5,** Imidodicarboxylic acid, dihydrazide
(effect on sarcoma)

RN 4375-11-5 HCAPLUS

CN Imidodicarbonic dihydrazide (9CI) (CA INDEX NAME)



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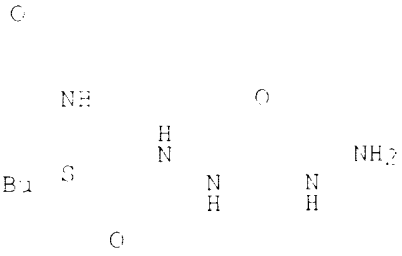
L14 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:461867 HCAPLUS
DOCUMENT NUMBER: 137:168385
TITLE: Inhibition of Cathepsin K with Lysosomotropic Macromolecular Inhibitors
AUTHOR(S): Wang, Dong; Bechan, Michal; Li, Weijie; Kopeckova, Pavla; Brocemme, Dieter; Kopecek, Jindrich
CORPORATE SOURCE: Department of Pharmaceutics and Pharmaceutical Chemistry/CCCD and Department of Bioengineering, University of Utah, Salt Lake City, UT, 84112, USA
SOURCE: Biochemistry (2002), 41(28), 8849-8859
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cathepsin K is the major enzyme responsible for the degrdn. of the protein matrix of bone and probably for the destruction of articular cartilage in rheumatoid arthritis joints. These processes occur mainly in the resorption lacuna and within the lysosomal compartment. Here, we have designed, synthesized, and evaluated new lysosomotropic (water-sol.) polymer-cathepsin K inhibitor **conjugates**. In particular, we characterized the relationship between **conjugate** structures and their activity to inhibit cathepsins K, B, L, and papain. A potent selective cathepsin K inhibitor, 1,5-bis(N-benzyloxycarbonylleucyl)carbohydrazide, was modified to 1-(N-benzyloxycarbonylleucyl)-5-(phenylalanylleucyl)carbohydrazide (I) to facilitate polymer **conjugation**. It was **conjugated** to the polymer chain termini of two water-sol. polymers {.alpha.-methoxy poly(ethylene glycol), abbreviated as mPEG-I; semitelechelic poly[N-(2-hydroxypropyl)methacrylamide], abbreviated as ST-PHPMA-I}. The **conjugation** of inhibitor I to N-(2-hydroxypropyl)methacrylamide (HPMA) copolymer side chains was accomplished via either a Gly-Gly spacer (PHPMA-GG-I) or with no spacer between I and the copolymer backbone (PHPMA-I). Kinetic anal. revealed that free inhibitor I possessed an apparent second-order rate const. against cathepsin K (kobs/[I] = 1.3.times.106 M-1 s-1) similar to that of unmodified 1,5-bis(Cbz-Leu) carbohydrazide, while I **conjugated** to the chain termini of mPEG and ST-PHPMA-COOH had slightly lower values (about 5.times.105 M-1 s-1). The kobs/[I] values for I attached to the side chains of HPMA copolymers (PHPMA-GG-I and PHPMA-I) were about 3.times.104 M-1 s-1. When tested against cathepsin L, inhibitor I and all its polymer **conjugates** produced kobs/[I] values 1-2 orders of magnitude less than those detd. for cathepsin K, while for cathepsin B and papain, the values were 2-4 orders of magnitude lower. The ability of mPEG-I and ST-PHPMA-I to inhibit cathepsin K activity in synovial fibroblasts was also evaluated. Both polymer-bound inhibitors were internalized by endocytosis and were ultimately trafficked to the lysosomal compartment. ST-PHPMA-I was internalized faster than mPEG-I. The inhibitory activity in the synovial fibroblast assay correlated with the rate of internalization..
IT **190142-08-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RACT (Reactant or reagent)
(inhibition of human lysosome cathepsin K with lysosomotropic macromol. inhibitors)
RN 190142-08-6 HCAPLUS
CN L-Leucine, N-[(phenylmethoxy)carbonyl]-, 2-(hydrazinocarbonyl)hydrazide (9CI) (CA INDEX NAME)

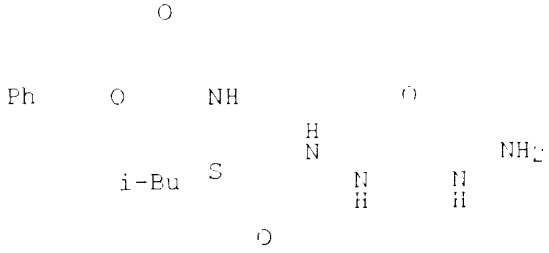
Absolute stereochemistry.



REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:350632 HCAPLUS
DOCUMENT NUMBER: 138:112178
TITLE: Design and synthesis of cathepsin K inhibitor-polymer **conjugates**
AUTHOR(S): Bechar, M.; Wang, D.; Popeckova, P.; Popecek, J.
CORPORATE SOURCE: Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, Salt Lake City, UT, 84112, USA
SOURCE: Proceedings - 28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 2, 1319-1320. Controlled Release Society: Minneapolis, Minn.
CODEN: 69CNY8
DOCUMENT TYPE: Conference
LANGUAGE: English
AB A carbohydrazide based cathepsin K inhibitor was synthesized and **conjugated** with water-sol. polymers. The enzyme inhibition activities of the low mol. wt. and macromol. inhibitors were tested with papain, a model cysteine protease. The **conjugates** have the potential to facilitate delivery of the inhibitor into the bone resorption lacuna.
IT **190142-08-6DP**, reaction products with polyhydroxypropylmethacrylamides
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(design and synthesis of cathepsin K inhibitor-polymer **conjugates**)
RN 190142-08-6 HCAPLUS
CN L-Leucine, N-[(phenylmethoxy)carbonyl]-, 2-(hydrazinocarbonyl)hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:684457 HCAPLUS
DOCUMENT NUMBER: 129:290447
TITLE: Preparation of branched hydrazone linkers for therapeutic drugs
INVENTOR(S): King, Dalton; Firestone, Raymond A.; Trail, Pamela
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 37 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

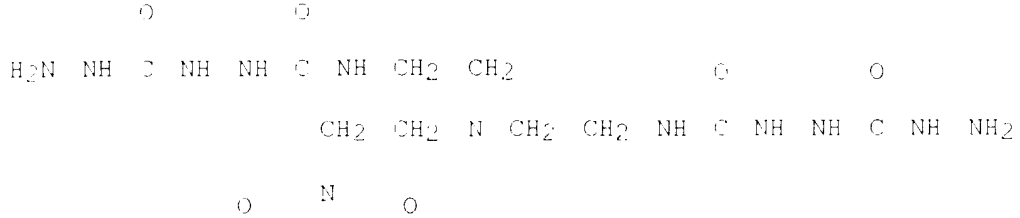
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5824805	A	19981020	US 1996-770614	19961219
US 6511101	B1	20030128	US 1998-136351	19980819

PRIORITY APPLN. INFO.: US 1995-9100P P 19951222
US 1996-770614 A3 19961219

AB Branched linkers A-Q-CONHCH[(NH)bCO-Wm-X](CH2)a(NH)bCO-(W)m-X [A is a thiol acceptor, Q is a bridging group, b and m are integers 0 or 1, W is a spacer moiety, a is an integer 2, 3, or 4, X is NHNH2, NHNHCONHNH2, or NHCH[(NH)bCO-Wm-X1](CH2)a(NH)bCO-(W)m-X1, where W, a, b and are as defined, X1 is NHNH2, NHNHCONHNH2, or NHCH[(NH)bCO-Wm-X2](CH2)a(NH)bCO-(W)m-X2, where W, a, b and are as defined, X2 is NHNH2, NHNHCONHNH2, or NHCH[(NH)bCO-Wm-X3](CH2)a(NH)bCO-(W)m-X3, where W, a, b and are as defined, X3 is NHNH2, NHNHCONHNH2, or NHCH[(NH)bCO-Wm-X4](CH2)a(NH)bCO-(W)m-X4, where W, a, b and are as defined, X4 is NHNH2, NHNHCONHNH2] were prepd. for linking a targeting ligand such as an antibody to a therapeutically active drug. Thus, the maleimidobutyrylglutamyldihydrazone of doxorubicin was prepd. and assayed for antitumor activity.

IT **192874-02-5P**
RL: SCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of branched hydrazone linkers for therapeutic drugs)

RN 192874-02-5 HCAPLUS
CN 2,8,9,8,11,13,14-Heptaazapentadecanedioic acid, 8-[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]-4,12-dioxo-, dihydrazide (9CI) (CA INDEX NAME)

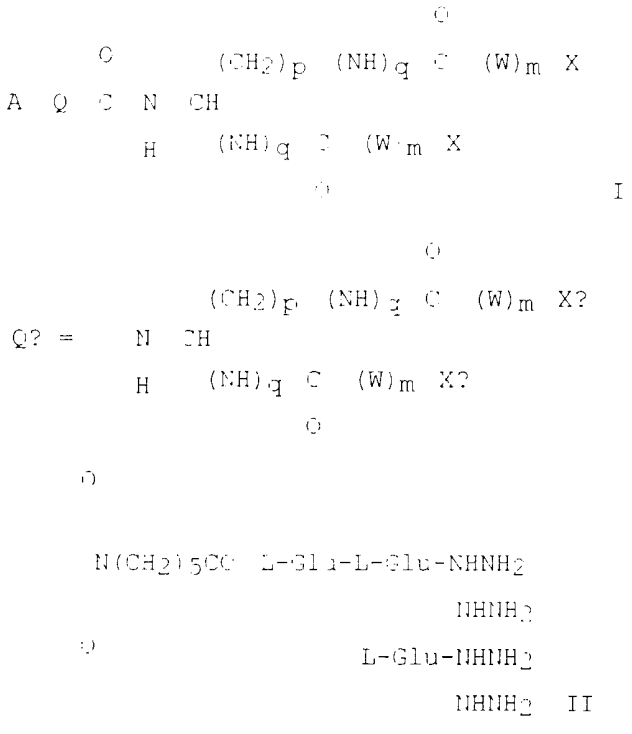


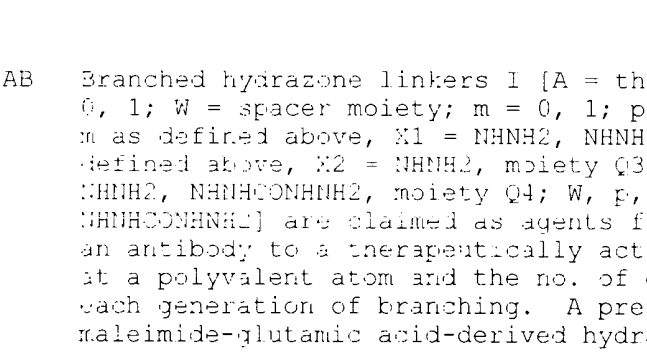
REFERENCE COUNT: 110 THERE ARE 110 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:503560 HCAPLUS
DOCUMENT NUMBER: 127:136079
TITLE: Preparation of branched hydrazone linkers for linking antibodies to therapeutic drugs
INVENTOR(S): King, Dalton; Firestone, Raymond; Trail, Pamela
PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9723242	A1	19970703	WO 1996-US20513	19961217
W: CA, JP, MX				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 871490	A1	19981021	EP 1996-944522	19961217
EP 871490	B1	20030319		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000503639	T2	20000328	JP 1997-523841	19961217
AT 234635	E	20030415	AT 1996-944522	19961217

PRIORITY APPLN. INFO.: US 1995-9100P P 19951222
WO 1996-US20513 W 19961217
OTHER SOURCE(S): MARPAT 127:136079
GI



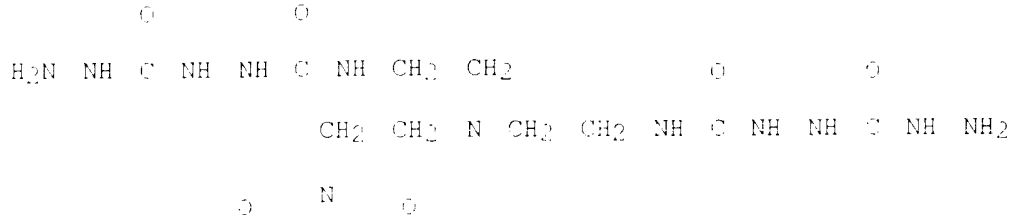


AB Branched hydrazone linkers I [A = thiol acceptor; Q = bridging group; q = 0, 1; W = spacer moiety; m = 0, 1; p = 2-4; X = NHNH2, moiety Q1; W, p, q, m as defined above, X1 = NHNH2, NHNHCONHNH2, moiety Q2; W, p, q, m as defined above, X2 = NHNH2, moiety Q3; W, p, q, m as defined above, X3 = NHNH2, NHNHCONHNH2, moiety Q4; W, p, q, m as defined above, X4 = NHNH2, NHNHCONHNH2] are claimed as agents for linking a targeting ligand such as an antibody to a therapeutically active drug. The point of branching is at a polyvalent atom and the no. of drugs increases by a factor of two for each generation of branching. A preferred drug is doxorubicin. Thus, maleimide-glutamic acid-derived hydrazone linker II was prepd. by std. coupling and deprotection methods. Condensation of II with 4 equiv of doxorubicin gave the corresponding tetrakis(hydrazone), which was then **conjugated** to monoclonal antibodies and **immunoconjugates** via the maleimide thiol acceptor. The in vivo antitumor potency and specificity of branched chain **conjugates** II and related mols. were detd.

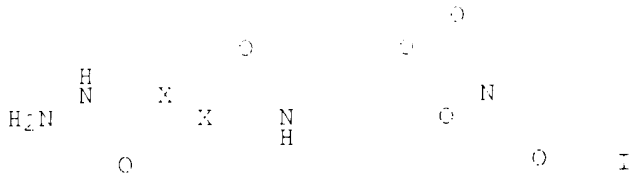
IT **192874-02-5P**
PL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of branched hydrazone linkers for linking antibodies to therapeutic drugs)

RN 192874-02-5 HCAPLUS

CN 2,3,5,8,11,13,14-Heptaazapentadecanedioic acid, 8-[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)ethyl]-4,12-dioxo-, dihydrazide (9CI) (CA INDEX NAME)



L14 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:466519 HCAPLUS
DOCUMENT NUMBER: 125:221494
TITLE: Synthesis of reagents for the one step incorporation of hydrazide functionality onto the lysine residues of proteins, and their use as linkers for carbonyl containing molecules
AUTHOR(S): Brott, William L.; Cwi, Cynthia
CORPORATE SOURCE: Lilly Research Laboratories, Technology Core Research, Indianapolis, IN, 46285, USA
SOURCE: Bioorganic & Medicinal Chemistry Letters (1996), 6(13), 1491-1496
CODEN: BMCLE8; ISSN: 0960-894X
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



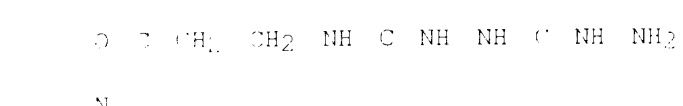
AB Two new reagents I.CF3CO2H (X = CH2, NH) were prepd. for the one step incorporation of hydrazide functionalities onto lysine side chains in proteins. Their utility as linking reagents was demonstrated by their use in the coupling of two model aldehydes and the anticancer agent doxorubicin to a monoclonal antibody.

IT **181638-49-3P 181638-56-2DP**, C-terminal amides with lysine side chains in monoclonal antibody CC49
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of **bifunctional** reagents for incorporation of hydrazide functionalities on protein lysine residues and use as linkers for carbonyl contg. mols.)

RN 181638-49-3 HCAPLUS
CN Carbonic dihydrazide, 2-[[[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]amino]carbonyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

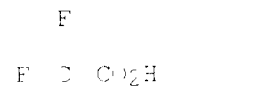
CM 1

CRN 181639-49-2
CMF C9 H14 N6 O6

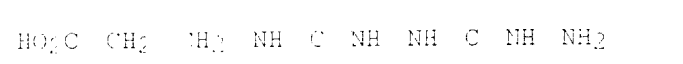


CM 2

CRN 76-05-1
CMF C2 H F3 O2



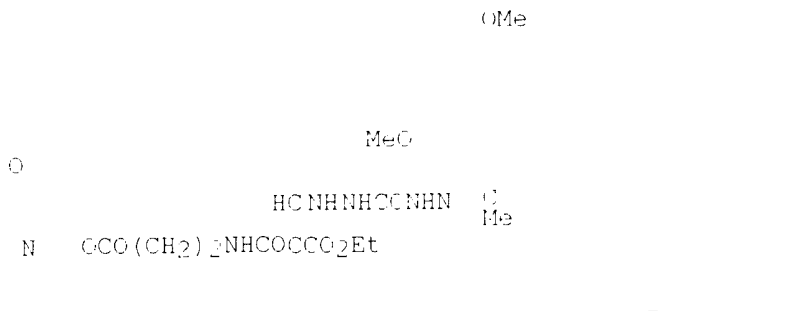
RN 181639-56-2 HCAPLUS
CN .beta.-Alanine, N-[[2-(hydrazinocarbonyl)hydrazino]carbonyl]- (9CI) (CA INDEX NAME)



L14 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:257887 HCAPLUS
DOCUMENT NUMBER: 122:38822
TITLE: Antibody-drug **conjugates**
INVENTOR(S): Barton, Russell Lavern; Briggs, Stephen Lyle
PATENT ASSIGNEE(S): Lilly, Eli, and Co., USA
SOURCE: Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 630894	A1	19941228	EP 1994-302952	19940425
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
JP 07010895	A2	19950106	JP 1994-82352	19940421
CA 2121990	AA	19941029	CA 1994-2121990	19940422

PRIORITY APPLN. INFO.: US 1993-54704 19930428
OTHER SOURCE(S): MARPAT 122:38822
GI



I

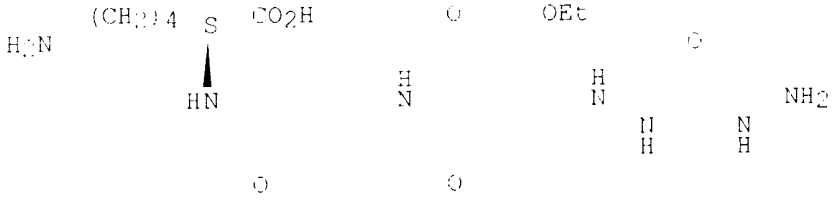
AB Malonate derivs. useful as linkers for prepn. of **immunoconjugates** comprising drugs and antibodies are provided. I was prepd. from Et malonate and .beta.-alanine benzyl ester by 6 steps and reacted with CC49 monoclonal antibody, then with doxorubicin in DMF to give an **immunoconjugate.**

IT **159795-68-3DP**, reaction products with antibody and doxorubicin
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of antibody-drug **conjugates**)

RN 159795-68-3 HCAPLUS

CN L-Lysine, N2-[N-[2-(ethoxycarbonyl)-3-[2-(hydrazinocarbonyl)hydrazino]-1-oxo-2-propenyl]-.beta.-alanyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.



L14 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:573214 HCAPLUS

DOCUMENT NUMBER: 121:173214

TITLE: Effect of derivatization of ribophosphate backbone and terminal ribophosphate groups in oligoribonucleotides on their stability and interaction with eukaryotic cells

AUTHOR(S): Boutorine, A. S.; Venyaminova, A. G.; Repkova, M. N.; Sergueyeva, Z. A.; Pyshnyi, D. V.

CORPORATE SOURCE: Sib. Div., Inst. Bioorg. Chem., Novosibirsk, 630090, Russia

SOURCE: Biochimie (1994), 76(1), 23-32
CODEN: BIOMBE; ISSN: 0300-9084

DOCUMENT TYPE: Journal

LANGUAGE: English

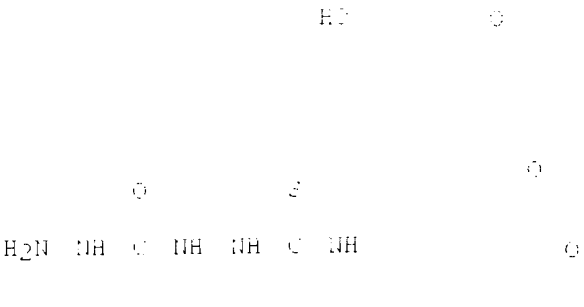
AB Various derivs. of oligoribonucleotides were synthesized by the H-phosphonate method. Different modifications of the ribophosphate

backbone were designed in order to protect the derivs. against nucleolytic enzymes present in the biol. media. These modifications include coupling of fluorescein moiety to 3'-terminal ribose, 2'-O-methylation of ribose, introduction of phosphoroamidates and coupling of the last 3'-terminal nucleotide via the 3'-->3'-phosphodiester bond. All modifications were tested for their effect on the stability of the derivs. against phosphodiesterase from snake venom and nucleases of the cell culture media. 2'-O-methylated oligoribonucleotides contg. either terminal 3'-3'-linkage or two 3'-terminal phosphoroamidate internucleotide bonds appeared to be the most stable under the most severe conditions used. The results demonstrate a possibility to use protected oligoribonucleotide derivs. for expts. in vivo when the use of deoxy-analogs might be ineffective. The uptake of 2'-O-methylated derivs. and their 5'-cholesterol **conjugates** (coupled via a disulfide bond) by human carcinoma cells did not differ from that of the corresponding oligodeoxyribonucleotides. 95% of the bound derivs. were found in the membrane-cytosolic fraction, while only 5% were found in the nuclear fraction. The oligonucleotide moiety of 2'-O-methyloligoribonucleotide-cholesterol **conjugate** was not translocated through the cellular membrane. After cleavage of the linkage between cholesterol and oligonucleotide by dithiothreitol the major portion of the oligonucleotide moiety was released into the media. The derivs., as well as their 5'-cholesterol **conjugates**, which entered the cells, were stable and protected from action of dithiothreitol dissolved in culture media. These results demonstrate an endocytosis mechanism of penetration as obsd. in similar expts. using oligodeoxyribonucleotides.

IT **157597-83-6**
RL: PCT (Reactant); RACT (Reactant or reagent)
(reaction of, with oligoribonucleotide)

RN 157597-83-6 HCAPLUS

CN Carbonic dihydrazide, 2-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)amino]thioxomethyl]- (9CI) (CA INDEX NAME)



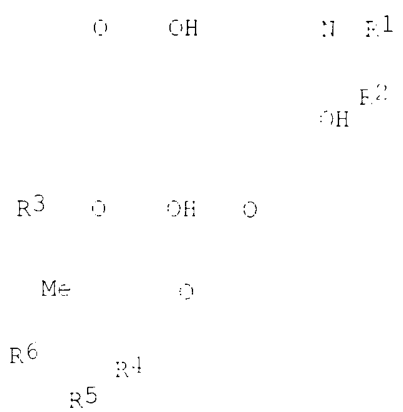
L14 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:214841 HCAPLUS
DOCUMENT NUMBER: 116:214841
TITLE: Preparation of anthracycline **immunoconjugates** as neoplasm inhibitors
INVENTOR(S): Kaneko, Takushi; Willner, David; Monkovic, Ivo; Greenfield, Robert S.; Braslawsky, Gary R.
PATENT ASSIGNEE(S): Bristol-Myers Squibb Co., USA
SOURCE: Eur. Pat. Appl., 45 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 457250	A2	19911121	EP 1991-107737	19910513
EP 457250	A3	19920701		
EP 457250	B1	19990714		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 5137877	A	19920811	US 1990-522996	19900514
US 5137877	B1	19960130		
AU 9174638	A1	19911114	AU 1991-74638	19910405
AU 646250	B2	19940310		
FI 9102285	A	19911115	FI 1991-2285	19910510
JP 04352765	A2	19921207	JP 1991-144757	19910510
JP 3010210	B2	20000214		
ZA 9103591	A	19920226	ZA 1991-3591	19910513
AT 182141	E	19990715	AT 1991-107737	19910513
ES 2134761	T3	19991016	ES 1991-107737	19910513
CA 2042503	AA	19911115	CA 1991-2042503	19910514
CA 2042503	C	20000725		
US 5348060	A	19940920	US 1992-865162	19920409
JP 2000026404	A2	20000125	JP 1999-132583	19990512
JP 3234911	B2	20011204		

PRIORITY APPLN. INFO.: US 1990-522996 A 19900514
JP 1991-144757 A3 19910510

OTHER SOURCE(S): MARPAT 116:214841

GI



I

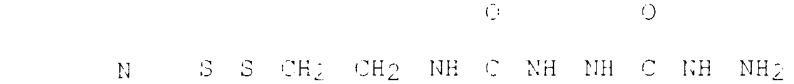
AB Anthracycline derivs. I [R1 = NHCONH(CH2)nSSR8, NHCONHNHCONH(CH2)nSSR8, NHCSNH(CH2)mCH:CH(CH2)nSSR8, NHCO2(CH2)nSSR8, NHArCONH(CH2)nSSR8, etc.; m, n = 1-10; R8 = (substituted) 2-pyridyl, -phenyl; Ar = phenylene; R2 = Me, CH2OH, CH2OCO(CH2)3Me, CH2OCOCH(OEt)2; R3 = OMe, OH, H; R4 = NH2 NHCOCF3, 4-morpholinyl, 3-cyano-4-morpholinyl, 1-piperidinyl, NHCH2Ph, N(CH2Ph)2, etc.; R5 = OH, tetrahydropyranyloxy, H; R6 = OH, H; R6 .noteq. OH when R5 = OH or tetrahydropyranyloxy], related compds., and their **conjugates** with ligands and antibodies, were prepd. Thus, 1-amino-4-[(2-pyridinyl)dithio]-2-butene-HCl (prepn. given) was treated with di(2-pyridyl) thionocarbonate and the product formed was condensed with Me3CO2CNHNH2. Deprotection of the resulting product by CF3CO2H gave N-[4-(2-pyridinyl)dithio]-2-butenyl]hydrazinecarbothioamide. This was condensed with adriamycin-HCl to give adriamycin 13-N-4-[(2-

pyridinyl)dithio]-2-butenylhydrazinecarbothioamide thiosemicarbazone.cntdot.HCl (II). The **immunoconjugate** of II with thiolated monoclonal antibody 5E9 had IC50 of 3.0 .times. 10-7M against Burkitt's lymphoma cells.

IT **133701-19-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as intermediate for anticancer **immunoconjugates**)

RN 133701-19-6 HCAPLUS

CN Carbonic dihydrazide, 2-[[[2-(2-pyridinyldithio)ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)



L14 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:425407 HCAPLUS

DOCUMENT NUMBER: 115:25407

TITLE: Novel trifunctional carrier molecule for the fluorescent labeling of haptens

AUTHOR(S): Bredehorst, Reinhard; Wemhoff, Gregory A.; Kusterbeck, Anne W.; Charles, Paul T.; Thompson, Richard B.; Ligler, Frances S.; Vogel, Carl Wilhelm

CORPORATE SOURCE: Dep. Biochem. Mol. Biol., Georgetown Univ., Washington, DC, 20007, USA

SOURCE: Analytical Biochemistry (1991), 193(2), 272-9
CODEN: ANBCA2; ISSN: 0003-2697

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors developed a novel trifunctional carrier mol. for the synthesis of hapten-fluorophore **conjugates** as reporter mols. in immunoassays. This carrier eliminates some of the disadvantages assocd. with currently used fluorophore-labeling procedures including high nonspecific binding. The backbone of the carrier consists of the 21 amino acid residues of the insulin A-chain mol. This polypeptide provides a single site (terminal amino group) for covalent coupling of the hapten, three carboxyl groups for the attachment of fluorophores, and four sulfhydryl groups for derivatization with hydrophilic residues to compensate for the hydrophobic effect of the attached fluorophores. The sites for fluorophore attachment are 4, 17, and 21 amino acids away from the hapten attachment site. This spatial sepn. minimizes quenching of the fluorescence signal due to interaction of the fluorophores with each other and with the attached hapten. 2,4-Dinitrophenol (DNP) was selected as model hapten, fluorescein as label, and S-sulfonate groups as hydrophilic residues. The properties of the DNP-insulin A-chain-fluorescein **conjugate** (DNP-Ins-Fl) were compared to those of a DNP deriv. labeled with a single fluorescein moiety via a small lysine spacer (DNP-Lys-Fl). The DNP-Ins-Fl **conjugate** exhibited a 3-fold lower nonspecific adsorption to **immobilized** non-immune Ig contributing to an approx. 3-fold more efficient displacement from the binding sites of an **immobilized** monoclonal anti-DNP antibody by the antigen DNP-lysine. Furthermore, at equimolar concns. the DNP-Ins-Fl generated a 2.6-fold higher fluorescent signal than DNP-Lys-Fl. Due to these properties of DNP-Ins-Fl, DNP-lysine could be detected with an approx.

10-fold higher sensitivity compared to DNP-Lys-Fl as labeled antigen. The use of DNP-Ins-Fl as reporter molecue in a competitive fluoroimmunoassay allowed the quant. detn. of picomole amts. of DNP-lysine.

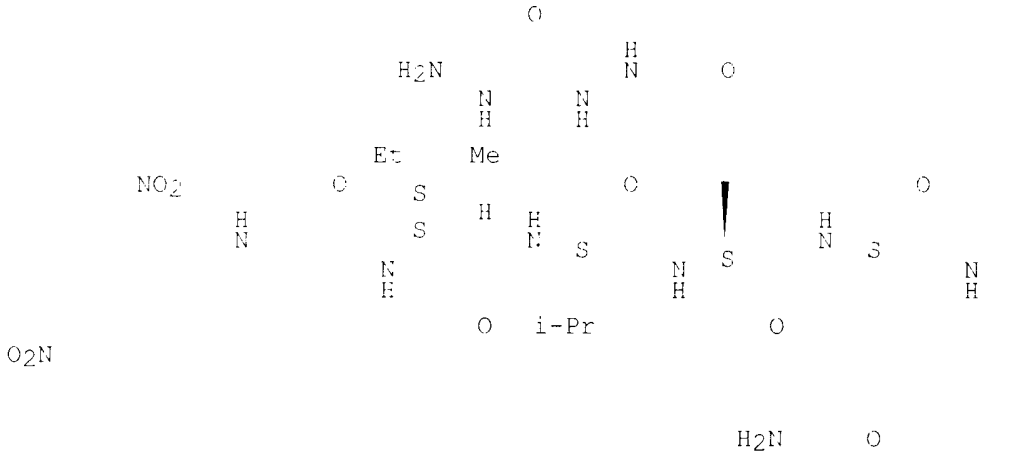
IT **134664-50-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with FITC)

RN 134664-50-9 HCAPLUS

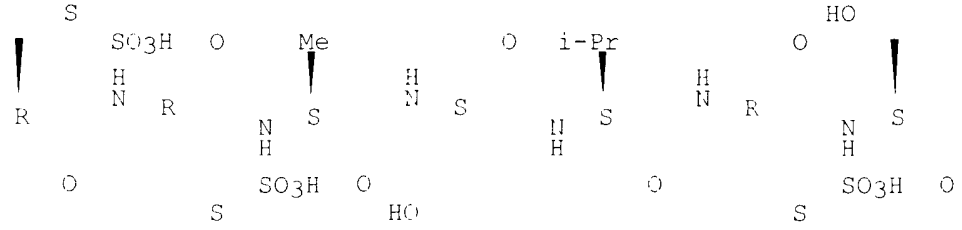
CN Insulin (cattle-A reduced), N-(2,4-dinitrophenyl)-, tris[2-(hydrazinocarbonyl)hydrazide], 6,7,11,20-tetrakis(hydrogen sulfate) (9CI) (CA INDEX NAME)

Absolute stereochemistry.

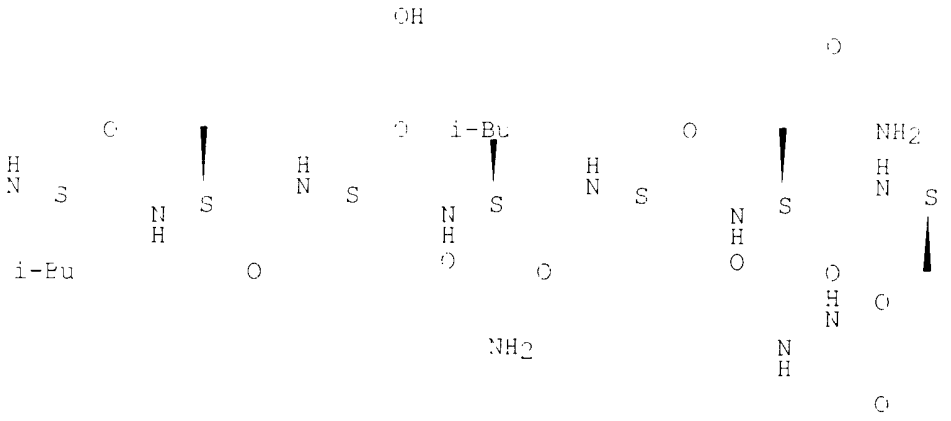
PAGE 1-A



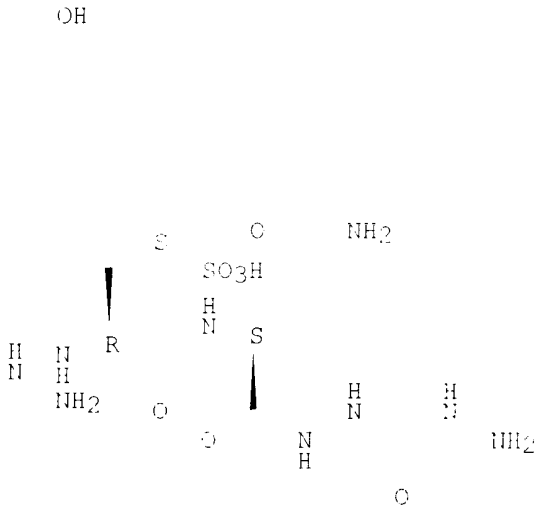
PAGE 1-B



PAGE 1-C

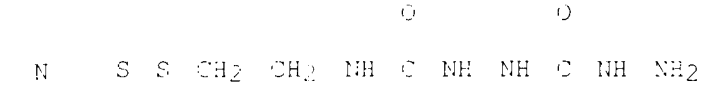


PAGE 1-D



L14 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:253927 HCAPLUS
DOCUMENT NUMBER: 114:253927
TITLE: New hydrazone derivatives of Adriamycin and their **immunoconjugates** - a correlation between acid stability and cytotoxicity
AUTHOR(S): Kaneko, Takushi; Willner, David; Monkovic, Ivo; Knipe, Jay O.; Braslawsky, Gary R.; Greenfield, Robert S.; Vyas, Dolatrai M.
CORPORATE SOURCE: Bristol-Myers Squibb Co., Wallingford, CT, 06492-7660, USA
SOURCE: Bioconjugate Chemistry (1991), 2(3), 133-41
CODEN: BCCHES; ISSN: 1043-1802
DOCUMENT TYPE: Journal

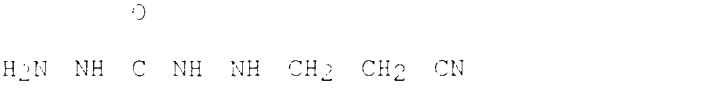
LANGUAGE: English
AB New N-substituted hydrazine linkers were synthesized and their hydrazone derivs. of adriamycin were prepd. The adriamycin derivs. were **conjugated** with a monoclonal antibody, 5E9. The release rate of adriamycin from the hydrazones and from some of the **conjugates** was studied, and their relationship to the cytotoxicity against 5E9-pos. Daudi cells was investigated.
IT **133701-19-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and condensation of, with adriamycin, hydrazone from)
RN 133701-19-6 HCAPLUS
CN Carbonic dihydrazide, 2-[[[2-(2-pyridinyldithio)ethyl]amino]carbonyl]- (9CI) (CA INDEX NAME)



L14 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2006 ACS
ACCESSION NUMBER: 1983:199302 HCAPLUS
DOCUMENT NUMBER: 98:199302
TITLE: Curing of poly(glycidyl ether) resins
INVENTOR(S): Sponseller, David B.; Melby, Earl G.; Fabris, Hubert J.
PATENT ASSIGNEE(S): General Tire and Rubber Co., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4377690	A	19830322	US 1982-382871	19820528

PRIORITY APPLN. INFO.: US 1982-382871 19820528
AB Cyanoalkylated hydrazides are useful as curing agents for epoxy resins, having useful pot life and showing fast cures. Thus, 1.68 g bis(cyanoethyl)carbohydrazide [85785-04-2] was mixed with 3.7 g Epon 828 [25068-38-6] to give a compn. having gel time 2.1 min at 149.degree. and room temp. pot life 6 days.
IT **85785-03-1**
RL: MOA (Modifier or additive use); USES (Uses)
(**crosslinking** agents, for epoxy resins)
RN 85785-03-1 HCAPLUS
CN Carbonic dihydrazide, 2-(2-cyanoethyl)- (9CI) (CA INDEX NAME)



L14 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1979:61[illegible]68 HCAPLUS
DOCUMENT NUMBER: 91:212[illegible]
TITLE: Aqueous dispersions of copolymers with carbonyl groups and containing hydrazine derivatives
INVENTOR(S): Ley, Gregor; Penzel, Erich; Rebafka, Walter; Bott, Kaspar
PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

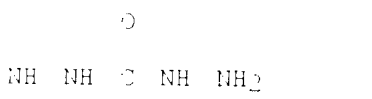
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 3516	A1	19790822	EP 1979-100168	19790119
EP 3516	B1	19810401		
R: BE, CH, DE, FR, GB, IT, NL, SE				
US 4158070	A	19780210	US 1979-3965	19790116
CA 1151736	A1	19830809	CA 1979-320124	19790124
DK 7[illegible]617	A	19790[illegible]7	DK 1979-317	19790125
[illegible]	B	19[illegible]0111		
DK 151[illegible]95	C	19[illegible]0[illegible]13		
NO 790[illegible]255	A	19790727	NO 1979-255	19790125
NO 155695	B	19870202		
NO 155695	C	19870513		
ES 477135	A1	19791201	ES 1979-477135	19790125
AT 79[illegible]557	A	19801015	AT 1979-557	19790125
AT 36[illegible]586	B	19810525		
JP 54110248	A2	19790829	JP 1979-7291	19790126
JP 61006861	B4	19860301		

PRIORITY APPLN. INFO.: DE 1978-2803258 19780126

AB Aq. coating dispersions of reaction products of polycarboxylic acid anhydrides, bis(semicarbazides), or $CO(NHNH_2)_2$ with aldehyde or ketone carbonyl group-contg. vinyl polymers are stabilized against hydrolysis during storage by addn. of 0.0002-0.02 mol Cu, Fe, Mn, V, Zn, Cr, and(or) Ni per mol hydrazine deriv.; the metal salts are also **crosslinking** catalysts. Thus, 200 parts 17.5% aq. 25:50:25 succinic dihydrazide-glutaric dihydrazide-adipic dihydrazide dispersion and 0.06 part $CuSO_4$ were added to a copolymer dispersion, prepd. from Me acrylate 375, Bu acrylate 90, acrylic acid 10, and acrolein 25 parts, to give a storage-stable dispersion. A room temp.-dried coating film swelled in DMF picking up 110-210% of its wt. in 1 day, but did not dissolve.

IT **1617-13-6D**, reaction products with carbonyl group-contg. polymers
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, stabilization of, with transition metal salts)

RN 1617-13-6 HCAPLUS
CN 1,2-Hydrazinedicarboxylic acid, dihydrazide (9CI) (CA INDEX NAME)



```
=> d his

     (FILE 'HOME' ENTERED AT 16:27:24 ON 06 JUN 2003)

     FILE 'HCAPLUS' ENTERED AT 16:27:34 ON 06 JUN 2003
                E SCHWARTZ DAVID A/AU
L1            90 S E3
L2             7 S L1 AND ?HYDRAZINE?
                SELECT FN L2 2

     FILE 'REGISTRY' ENTERED AT 16:28:40 ON 06 JUN 2003
L3            18 S E1-18

     FILE 'HCAPLUS' ENTERED AT 16:29:17 ON 06 JUN 2003
L4             5 S L2 AND L3

     FILE 'REGISTRY' ENTERED AT 16:39:27 ON 06 JUN 2003
L5               STR
L6             3 S L5
L7           609 S L5 FUL

     FILE 'HCAPLUS' ENTERED AT 16:41:35 ON 06 JUN 2003
L8          1059 S L7
L9            38 S L8 AND (?CROSSLINK? OR ?BIFUNCT? OR IMMOBILI? OR ?CONJUGAT?)

     FILE 'REGISTRY' ENTERED AT 16:43:43 ON 06 JUN 2003
L10              STR L5
L11            5 S L10
L12           95 S L10 FUL

     FILE 'HCAPLUS' ENTERED AT 16:46:08 ON 06 JUN 2003
L13          122 S L12
L14           12 S L13 AND (?CROSSLINK? OR ?BIFUNCT? OR IMMOBILI? OR ?CONJUGAT?)
```

```
=> d que stat l9
L5                STR

         6
        G1

AK   NH  C   NH  NH2
 1   2   3   4   5

VAR G1=O/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X20 C  AT   1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L7           609 SEA FILE=REGISTRY SSS FUL L5
L8          1059 SEA FILE=HCAPLUS ABB=ON  L7
L9            38 SEA FILE=HCAPLUS ABB=ON  L8 AND (?CROSSLINK? OR ?BIFUNCT? OR
                 IMMOBILI? OR ?CONJUGAT?)
```

```
=> d que stat l14
L10             STR

            6
           G1

AK  NH  NH  C   NH  NH2
 8   7   2  3   4   5

VAR G1=O/S
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS M1-X20 C  AT   8

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
L12           95 SEA FILE=REGISTRY SSS FUL L10
L13          122 SEA FILE=HCAPLUS ABB=ON  L12
L14           12 SEA FILE=HCAPLUS ABB=ON  L13 AND (?CROSSLINK? OR ?BIFUNCT? OR
                 IMMOBILI? OR ?CONJUGAT?)
```